three inches = one foot
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one inch = one foot
three-quarters inch = one foot
one-half inch = one foot
three-eighths inch = one foot
one-quarter inch = one foot
one-eighth inch = one foot

GENERAL STRUCTURAL NOTES

1. THE STRUCTURAL DESIGN OF THIS PROJECT IS BASED UPON APPROPRIATE PORTIONS OF THE FOLLOWING:
   A) INTERNATIONAL BUILDING CODE, 2012.
   B) AMERICAN CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE "ACI 318–11.
   C) ALUMINUM ASSOCIATION STANDARD AA–94, ALUMINUM DESIGN MANUAL.
   D) STEEL JOISTS INSTITUTE STANDARD SPECIFICATIONS, LOAD TABLES FOR STEEL JOISTS AND JOIST GIRDERS – S17–1994.
   E) AISC "STEEL CONSTRUCTON MANUAL" – FOURTEENTH EDITION.
   F) AISC SPECIFICATION FOR THE DESIGN OF HOLLOW STEEL STRUCTURAL SECTIONS, HSS 1997.
   G) AISC SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS, 1997 EDITION.
   H) BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES, ACI 530–05, 530.1–05.
   I) MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7–10.
   J) STEEL DECK INSTITUTE'S SPECIFICATIONS AND COMMENTARY FOR STEEL ROOF DECK, NON–COMPOSITE FLOOR DECK AND COMPOSITE FLOOR DECK.
   K) FLOOD RESISTANT DESIGN AND CONSTRUCTION ASCE 24–98.
2. THE CONTRACTOR IS RESPONSIBLE FOR AND SHALL VERIFY AND COORDINATE ALL DIMENSIONS AND DETAILS CONCERNING THE WORK BEFORE PROCEEDING. ANY DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. THE CONTRACTOR SHALL VERIFY THE ELEVATIONS OF THE EXISTING STRUCTURES AND CLEARANCES TO NEW CONSTRUCTION.
3. DETAILS SHOWN IN ANY SECTION APPLY TO ALL SIMILAR SECTIONS UNLESS OTHERWISE NOTED.
4. THE CONTRACTOR SHALL FULLY BRACE AND OTHERWISE PROTECT THE WORK IN PROGRESS UNTIL THE BUILDING AND/OR STRUCTURE IS COMPLETED.
5. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND LOCATE ALL EXISTING UNDERGROUND UTILITIES AND LINES AS NEEDED BEFORE COMMENCING CONSTRUCTION.
6. FOR DESIGN PURPOSES, A HIGH GROUNDWATER LEVEL WAS ESTABLISHED AT THE FINISHED GRADE ELEVATION. THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN A COMPLETE SYSTEM FOR DEWATERING THE CONSTRUCTION SITE AS REQUIRED TO PROPERLY CONSTRUCT ALL STRUCTURES IN THE DRY. SUCH PROCEDURES SHALL AVOID DISTURBANCE OF THE SOIL STRUCTURE.
7. FOR THE LOCATION AND DETAIL OF ALL DRAINS, SEE THE PLUMBING, EQUIPMENT AND ARCHITECTURAL CONTRACT DRAWINGS.

FOUNDATION NOTES

1. THE SITE SOILS HAVE BEEN INVESTIGATED BY THE FIRM CGC CONSULTING AND FOUND SUITABLE TO SUPPORT THE FOUNDATION ELEMENTS AS STATED IN THE GEOTECHNICAL REPORT DATED MARCH 31, 2015 AND JUNE 23, 2015. THE FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE ABOVE STATED REPORTS. BOTTOMS OF FOUNDATIONS SHALL BEAR ON UNDISTURBED SOIL OR CONTROLLED COMPACTED FILL AS PER THE RECOMMENDATIONS OF THE ABOVE REFERENCED REPORT.
2. THE ACTUAL FIELD CONDITIONS AS FOUND DURING THE CONSTRUCTION PERIOD SHALL GOVERN THE FOUNDATION REQUIREMENTS AND THE CONTRACTOR SHALL FULFILL ALL THE REQUIREMENTS OF THE CONTRACT DRAWINGS AND THE SPECIFICATIONS.
3. WHERE SOILS OF THE SPECIFIED ALLOWABLE BEARING CAPACITY IS FOUND AT A LOWER ELEVATION, THE FOUNDATIONS SHALL BE LOWERED TO CONFORM TO THE ACTUAL SOIL BEARING STRATA ELEVATION. AS DETERMINED BY THE ENGINEER, THE BOTTOM ELEVATION OF THE FOUNDATION ELEMENT MAY BE LOWERED, THE TOTAL THICKNESS OF THE FOUNDATION ELEMENT MAY BE VARIED TO SUIT THE FIELD CONDITIONS OR SUBGRADE MAY BE REPLACED WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM) OR STRUCTURAL COMPACTED FILL. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OBTAIN SUCH APPROVAL BEFORE PROCEEDING WITH CONSTRUCTION OF THE FOUNDATIONS.
4. NO FOUNDATION ELEMENT SHALL BE PLACED UNTIL THE ENGINEER HAS INSPECTED THE BEARING MATERIAL AND HAS GIVEN PERMISSION TO PLACE CONCRETE.
5. THE BOTTOM OF ALL FOOTINGS OR OTHER FOUNDATION ELEMENTS SHALL BE A MINIMUM OF 3'–6" BELOW THE FINAL FINISHED GRADE FOR FROST PROTECTION, UNLESS SHOWN OTHERWISE..
6. FOOTINGS SHALL NOT BE PLACED ABOVE 1 VERTICAL TO 2 HORIZONTAL SLOPE AS EXTENDED FROM THE CLOSEST EDGE OF ANY OTHER FOUNDATION OR ANY UNDISTURBED SOIL.
7. NO FOOTING, FOUNDATION ELEMENT, OR SLAB ON GRADE SHALL BE PLACED ON FROZEN MATERIAL UNDER ANY CIRCUMSTANCES.
8. ALL BEARING STRATA UNDER INSTALLED FOUNDATION ELEMENTS SHALL BE PROTECTED FROM FREEZING.
9. ALL COLUMN FOOTINGS SHALL BE CENTERED ON THE GRID CENTERLINES UNLESS NOTED OTHERWISE ON THE CONTRACT DRAWINGS OR SECTIONS.
10. ALL SITE SUBGRADE PREPARATIONS SHALL BE AS PER THE GEOTECHNICAL REPORTS.
11. ALL BACKFILLING AND COMPACTION AGAINST FOUNDATION AND TANK WALLS SHALL BE CAREFULLY EXECUTED WITH SMALL HAND PROPELLED COMPACTION EQUIPMENT. NO BACKFILLING OPERATIONS SHALL BE STARTED AT THE PROJECT SITE UNTIL FRAMED SLABS BEARING ON THE FOUNDATION WALLS AND THE SLABS ON GRADE ARE IN PLACE AND THE CONCRETE HAS ATTAINED ITS FINAL SET. IN NO INSTANCE SHALL TRUCKS, BULLDOZERS, ETC., BE PERMITTED CLOSER THAN 6'–0" TO ANY WALL BEING BACKFILLED AGAINST.
12. CONCRETE WALLS BELOW THE FINAL FINISH GRADE SHALL BE WATERPROOFED, AS INDICATED ON THE CONTRACT DRAWINGS AND THE SPECIFICATIONS.
13. ALL SLABS ON GRADE SHALL BE PLACED ON A MINIMUM 12" OF COMPACTED CRUSHED STONE FILL. FOR COMPACTION REQUIREMENTS, SEE DIVISION 2 SPECIFICATIONS.

CAST–IN–PLACE CONCRETE NOTES

1. ALL REINFORCED CAST–IN–PLACE CONCRETE CONSTRUCTION SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI STANDARD 318–08), "ACI DETAILING MANUAL" (ACI PUBLICATION SP 66–(04)), EXCEPT AS SPECIFICALLY MODIFIED BY THE CONTRACT DRAWINGS AND THE SPECIFICATIONS.
2. ALL CONCRETE USED ON THE PROJECT SHALL HAVE A SPECIFIED 28–DAY COMPRESSIVE STRENGTH (f'c AS NOTED BELOW. SUCH STRENGTHS SHALL BE DETERMINED BY A TESTING LABORATORY. FOR FURTHER REQUIREMENTS, SEE THE SPECIFICATIONS.
   A) f'c = 4,500 PSI. CONCRETE HAVING THIS SPECIFIED COMPRESSIVE STRENGTH SHALL BE USED FOR ALL REINFORCED CONCRETE WORK, EQUIPMENT BASES, FILL IN FLOOR AREAS, CONCRETE CURBS, SIDEWALKS, AND IN GENERAL THROUGHOUT THE PROJECT UNLESS NOTED OTHERWISE ON THE CONTRACT DRAWINGS.
   B) f'c = 2,500 PSI. CONCRETE HAVING THIS SPECIFIED COMPRESSIVE STRENGTH SHALL BE USED FOR NON–REINFORCED WORK SUCH AS SETTING SLABS AND AS MAY OTHERWISE BE REQUIRED BY CONDITIONS ENCOUNTERED DURING THE PROGRESS OF THE PROJECT.
3. ALL CONCRETE, REGARDLESS OF SPECIFIED DESIGN STRENGTH, SHALL CONTAIN STONE OR GRAVEL AGGREGATE SUCH THAT THE WEIGHT OF THE HARDENED CONCRETE IS 145 POUNDS PER CUBIC FOOT (+3%) WITH THE INCLUSION OF AIR ENTRAINMENT.
4. FOR AIR ENTRAINMENT REQUIREMENTS SEE SPECIFICATIONS 03 56 04.
5. ALL REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH, fy = 60 KSI AND SHALL BE NEW DOMESTIC DEFORMED BILLET– STEEL CONFORMING TO ASTM A615, GRADE 60.
6. ALL DETAILING, BENDING, PLACEMENT AND SUPPORT OF REINFORCING SHALL CONFORM TO THE STANDARDS CITED IN NOTE 1, EXCEPT AS MODIFIED BY THE CONTRACT DRAWING.
7. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL OF THE STANDARD AND SPECIAL ACCESSORIES FOR SUPPORTING, HOLDING AND TYING REINFORCEMENT ADEQUATELY IN ITS PROPER POSITION. THIS WILL INCLUDE SUPPORT BARS OR INDIVIDUAL HIGH CHAIRS FOR TOP REINFORCEMENT AND BOLSTERS FOR BOTTOM REINFORCING AND WIRING ALL REINFORCING IN PLACE. THE CONTRACTOR SHALL DESIGN AND DETAIL SPECIAL SUPPORTS AS REQUIRED AND SUBMIT DETAILS AND LAYOUTS FOR REVIEW BY THE ENGINEER.
8. INDIVIDUAL HIGH CHAIRS FOR TOP REINFORCEMENT SHALL BE PROVIDED WITH LEGS CROSSED, LACED AND WELDED, FOR SLABS OVER 12" THICK. THEY SHALL BE DESIGNED TO ADEQUATELY SUPPORT CONSTRUCTION LOADS AND BE SUBMITTED FOR REVIEW BY THE ENGINEER.
9. ALL REINFORCING STEEL BARS SHALL BE SPLICED AT ALL LAP POINTS, BENT AS REQUIRED, AND DEVELOPED AS PER THE TYPICAL DETAILS AND SCHEDULES. CONTINUOUS TOP REINFORCING SHALL BE SPLICED MIDWAY BETWEEN SUPPORTS AND CONTINUOUS BOTTOM REINFORCING AT THE SUPPORTS, UNLESS OTHERWISE SHOWN ON DRAWINGS.
10. PROVIDE ONE #4 NOSING BAR IN EACH CONCRETE STEP, HOOKED AT BOTH ENDS. PROVIDE AND INSTALL NOSINGS AT ALL INTERIOR AND EXTERIOR STAIRS AS INDICATED IN THE STAIR SECTIONS AND DETAILS AND ARCHITECTURAL CONTRACT DRAWINGS.
11. CLEAR CONCRETE COVER OVER PRINCIPAL REINFORCING SHALL BE AS CALLED FOR IN THE TYPICAL DETAILS AND OTHERWISE SHOWN ON THE CONTRACT DRAWINGS.
12. ALL WELDED WIRE REINFORCEMENT (WWR) SHALL CONFORM TO ASTM A1064.
13. ALL HOLES, CUTS, OR OPENINGS, 12" OR LARGER IN SLABS REQUIRE THE CONSENT OF THE ENGINEER UNLESS THEY ARE SHOWN ON THE CONTRACT DRAWINGS. NO OPENING SHALL BE PERMITTED CLOSER THAN 1'–0" TO ANY COLUMN FACE UNLESS PERMITTED BY THE ENGINEER.
14. WHERE PIPE SLEEVES (UP TO 2" IN DIAMETER) PASS THROUGH CONCRETE BEAMS, PROVIDE AN ADDITIONAL STIRRUP EACH SIDE OF SLEEVE. SLEEVES FOR PIPES 2" OR LARGER IN DIAMETER MUST BE STEEL OR CAST IRON AND THE LOCATION MUST BE APPROVED BY THE ENGINEER OR AS SHOWN ON THE CONTRACT DRAWINGS.
15. FOR BRICK SHELF DETAILS, PROJECTED COLUMN DETAILS, WEEPHOLES, PARAPET DETAILS, FASCIA DETAILS, REGLETS, ETC., SEE THE ARCHITECTURAL CONTRACT DRAWINGS.
16. THE CONTRACTOR SHALL PROVIDE FLASHING REGLETS IN ALL CONCRETE WORK IN ACCORDANCE WITH THE ARCHITECTURAL CONTRACT DRAWINGS.
17. WHERE MASONRY ABUTS CONCRETE, PROVIDE VERTICAL METAL DOVETAIL SLOTS 2'–0" O.C. TO RECEIVE GALVANIZED STEEL DOVETAIL ANCHORS SUPPLIED BY MASONRY CONTRACTOR. ANCHORS SHALL BE PLACED AT 16" O.C. VERTICALLY, UNLESS OTHERWISE NOTED OR DETAILED ON THE CONTRACT DRAWINGS.
18. METAL ITEMS CAST INTO CONCRETE SHALL HAVE WELDED ANCHOR STRAPS OF MINIMUM DIMENSIONS 2" X 1/2" X 1'–0" HOOKED 2". STRAPS SHALL BE SPACED AT 24" O.C. MAXIMUM, UNLESS OTHERWISE NOTED.
19. ALL STRUCTURAL MEMBERS SHALL BE CAST MONOLITHICALLY FOR THEIR FULL DEPTH, UNLESS OTHERWISE NOTED.
20. IF REQUIRED, VERTICAL CONSTRUCTION JOINTS IN CONCRETE WALLS SHALL BE LOCATED AT MIDPOINT BETWEEN ANY SUPPORTING PIERS, OR BUTTRESSES, AND AT LEAST 4'–0" FROM ANY WALL OPENING EXCEPT WHERE SPECIFICALLY SHOWN ON THE CONTRACT DRAWINGS.
21. HORIZONTAL CONSTRUCTION JOINTS WILL NOT BE PERMITTED IN CONCRETE WALLS EXCEPT WHERE SPECIFICALLY SHOWN ON THE CONTRACT DRAWINGS.
22. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED, WETTED AND SLUSHED WITH CEMENT GROUT JUST PRIOR TO PLACING NEW CONCRETE.
23. ALL EXPOSED CONCRETE EDGES SHALL BE GROUND TO A 3/4" RADIUS OR CHAMFERED AS PER THE CONTRACT DRAWINGS.
24. AT OPENINGS IN CONCRETE WALLS OR GRADE BEAMS (UNLESS OTHERWISE NOTED) PROVIDE ADDITIONAL REINFORCEMENT AS PER TYPICAL DETAILS FOR WALL OPENINGS.
25. THE CONTRACTOR SHALL ADJUST THE SHORING USING SURVEYING INSTRUMENTS PRIOR TO PLACING, AND IMMEDIATELY AFTER PLACING OF CONCRETE FOR FORMED BEAMS AND SLABS. ANY ADJUSTMENT SHALL NOT BE PERMITTED AFTER THE INITIAL SET OF THE CONCRETE.
26. STRUCTURAL CONCRETE ROOF SLABS WHICH ARE TO BE COVERED WITH LIQUID APPLIED MEMBRANE ROOFING SHALL BE CHEMICALLY CURED ONLY WITH A CURING COMPOUND COMPATIBLE WITH THE LIQUID APPLIED MEMBRANE ROOFING OR ONLY WATER CURED.
27. ALL CONSTRUCTION JOINTS IN STRUCTURAL FRAMED SLABS AND BEAMS SHALL BE CLOSE TO THE MIDSPAN OF THE MEMBER. SEE "TYPICAL CONSTRUCTION JOINT DETAILS" FOR REQUIREMENTS.
28. THE SPACING OF REINFORCING SHOWN ON THE CONTRACT DRAWINGS IS THE MAXIMUM PERMITTED. IT MAY BE REDUCED FOR CONSTRUCTION CONSIDERATIONS BUT IS NOT TO BE EXCEEDED.
29. PROVIDE AND MAINTAIN ADEQUATE BRACING AND SHORING UNTIL THE STRUCTURE HAS BEEN COMPLETED AND CONCRETE HAS ACHIEVED FINAL STRENGTH.

CONCRETE MASONRY UNITS NOTES

1. ALL MASONRY DESIGN SHALL CONFORM TO ACI 530 AND 530.1.
2. REINFORCED MASONRY WALL DESIGN IS BASED ON INSPECTED MASONRY AS REQUIRED BY ACI 530.1 SPECIFICATION FOR ESSENTIAL FACILITIES THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A QUALITY CONTROL AND INSPECTION PROGRAM TO INSURE THAT ALL MASONRY WALL CONSTRUCTION IS IN COMPLIANCE WITH QUALITY ASSURANCE LEVEL C. REFER TO SPECIFICATION FOR THE MINIMUM REQUIREMENTS FOR THIS PROGRAM.
3. MASONRY CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF "SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1/ASCE6/TMS602)" PUBLISHED BY THE AMERICAN CONCRETE INSTITUTE, EXCEPT AS MODIFIED BY THE CONTRACT DOCUMENTS.
4. CONSTRUCT REINFORCED AND UNREINFORCED MASONRY AS NOTED ON THE PLANS AND DETAILS AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE "REINFORCED UNIT MASONRY" SPECIFICATION.
5. USE CONCRETE MASONRY UNITS CONFORMING TO ASTM C90. PROVIDE f'm OF 2,000 PSI (UNIT STRENGTH 2,800 PSI) FOR ALL REINFORCED MASONRY WALLS. PERFORM COMPRESSIVE STRENGTH COMPLIANCE BY PRISM TEST METHOD. USE ONLY MASONRY UNITS THAT ARE A MIN. OF 50% SOLID. REFER TO THE SPECIFICATIONS FOR TESTING FREQUENCIES.
6. USE TYPE "S" MORTAR IN ACCORDANCE WITH ASTM C270. USE ~6" FULL–BEDDED JOINTS FOR ALL MASONRY UNITS. REMOVE MORTAR PROTRUDING INTO CELL CAVITIES THAT ARE TO BE REINFORCED AND GROUTED. ALLOW A MIN. OF 24 HOURS FOR MORTAR TO CURE BEFORE PLACING GROUT. REFER TO THE SPECIFICATIONS FOR TESTING REQUIREMENTS.
7. USE GROUT CONFIRMING TO ASTM C–476 WITH A MIN. COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS, TESTED IN ACCORDANCE WITH ASTM C1019. AGGREGATE TO CONFORM TO ASTM C404 FOR COARSE GROUT AND SLUMP OF 8" TO 11". TEST SAMPLES FOR COMPRESSIVE STRENGTH. REFER TO THE SPECIFICATION FOR TESTING REQUIREMENTS.
8. REFER TO THE MASONRY DETAILS FOR REINFORCING REQUIREMENTS.
9. FOR UNREINFORCED WALLS USE STANDARD TRUSS–TYPE MASONRY HORIZONTAL REINFORCING IN EVERY OTHER COURSE OF MASONRY; EXTEND INTO TIE COLUMNS.
10. USE ASTM A–615 GRADE 60 REINFORCING STEEL.
11. IN HIGH–LIFT GROUTING USE A MAX. LIFT OF 5'–0" WITH MIN. HALF HOUR MAX. ONE HOUR BETWEEN LIFTS. VIBRATE EACH LIFT AND RECONSOLIDATE UPPER PORTION OF PREVIOUS LIFT AFTER PLACING NEXT LIFT.
12. WHERE ANCHOR BOLTS ARE SET IN MASONRY WALL, FILL BLOCK CELLS WITH GROUT FOR BOLTED COURSE, ONE COURSE ABOVE AND TWO COURSES BELOW ANCHOR ELEVATION.
13. USE PRESSURE–TREATED WOOD FOR ALL WOOD IN CONTACT WITH MASONRY.
14. UNLESS OTHERWISE NOTED, PROVIDE LINTELS OR HEADERS OVER ALL MASONRY OPENINGS, LINTELS OR HEADERS TO BEAR MIN. 8 INCHES EACH SIDE OF OPENING. REFER TO TYPICAL DETAILS.
15. FOR WALLS REQUIRING A FIRE RESISTANCE RATING, PROVIDE TO THE ENGINEER A CERTIFICATION INDICATING THAT THE MANUFACTURER OF THE CONCRETE MASONRY UNITS HAS COMPLIED WITH ALL THE REQUIREMENTS OF THE UL LISTINGS AS SPECIFIED ON THE ARCHITECTURAL DRAWINGS.
16. COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR MASONRY LAYOUT AND LOCATIONS OF OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

CMU WALL REINFORCING NOTES

1. CHEMICAL ANCHOR ALL CMU REINFORCING IN EXISTING SLAB AND EXTEND INTO UPPERMOST BOND BEAM WITH 90° HOOKS.
2. CELLS AROUND REINFORCING ARE TO FILLED WITH 3,000 PSI GROUT.
3. PROVIDE FOUR (4) FILLED CELLS OF TYPICAL WALL REINFORCING AT INTERSECTIONS, THREE (3) FILLED CELLS OF TYPICAL WALL REINFORCING AT CORNERS, AND TWO (2) FILLED CELLS OF TYPICAL WALL REINFORCING AT EACH SIDE OF EACH OPENINGS AND ENDS OF WALLS. PROVIDE (5) FILLED CELLS OF TYPICAL WALL REINF. AT CORNERS OF STAIRWELL AND ELEVATOR WALLS.
4. ALL CONCRETE MASONRY UNITS SHALL BE PLACED IN RUNNING BOND.
5. TYPICAL CMU WALL REINFORCING:
   A) REINFORCE WITH #6 BARS VERTICAL AT 24", UNLESS OTHERWISE NOTED.
   B) PROVIDE A DOUBLE HEIGHT 10" CMU BOND BEAM WITH (2)#6 AT TOP OF MASONRY WALLS.
   C) REINFORCE CMU WALLS WITH #4 @ 24" ABOVE ROLLUP DOORS AND WHERE NOTED ON THE DRAWINGS.
6. HORIZONTAL JOINT REINFORCING IN ALL BLOCK WALLS SHALL BE STANDARD (9 GA. SIDE AND CROSS RODS) LADDER TYPE WALL REINFORCING AT 16". ALL WALLS PERPENDICULAR TO EXTERIOR WALLS SHALL HAVE ADDITIONAL PREFABRICATED "T" OR "L" JOINT REINFORCING AS INDICATED IN TYPICAL CMU DETAILS.
7. GROUT STOP SHALL BE A FIBERGLASS MESH CONFORMING TO ASTM STANDARD D1668–73, TYPE 207.
8. SPLICE ALL BARS 56 BAR DIAMETERS, UNLESS OTHERWISE NOTED. FOR #6 BARS, SPLICE LENGTH AND DEVELOPMENT LENGTH SHALL BE 42 INCHES. ALL SPLICES SHALL BE LOCATED WITHIN ONE–QUARTER SPAN LENGTH FROM TOP OR BOTTOM OF WALL.
9. USE ONE TOP & BOTTOM CORNER BAR (MATCH TYP. REINFORCING) W/56 BAR DIAMETER LONG LEGS EACH WAY IN ALL BOND BEAM CORNERS & INTERSECTIONS. EXTEND BARS TO EXTERIOR FACE.
10. BOTH VERTICAL AND HORIZONTAL REINFORCEMENT SHALL BE ACCURATELY POSITIONED AND RIGIDLY SECURED WITH REBAR POSITIONERS EVERY 48 INCHES AND LAP–JOINT TIES.

PIPING, PIPELINE APPURTENANCES, VALVES, SUPPORTS, HANGERS, STRUTS, BLOCKING AND ANCHORAGE NOTES

1. PIPING TRADE CONTRACTORS SHALL REFER TO THE APPLICABLE DIVISIONS OF THE SPECIFICATIONS FOR SUPPORTS, BLOCKING, ANCHORAGE AND RESTRAINING OF ALL PIPING, VALVES AND PIPING APPURTENANCES.
2. PIPING TRADE CONTRACTORS SHALL REVIEW WITH THE ENGINEER AND THE CONTRACTOR ALL LOCATION AND ARRANGEMENT OF PIPING OPENINGS, PIPE SLEEVES, TRENCHES, AS REQUIRED TO COMPLETE HIS WORK AND SHALL NOT PROCEED WITH INSTALLATION OF SAME UNTIL SUCH HAS BEEN REVIEWED AND WILL NOT IMPAIR THE STRUCTURAL INTEGRITY OF THE CONCRETE MEMBERS.
3. PIPE TRADE CONTRACTORS SHALL PROVIDE AND COORDINATE THE INSTALLATION OF ALL ITEMS TO BE EMBEDDED IN THE CONCRETE SYSTEM AND SHALL COOPERATE SO AS NOT TO DELAY THE CONSTRUCTION WORK. SUCH ITEMS SHALL INCLUDE PIPES, SLEEVES, BOLTS, STRUTS, HANGERS AND FITTINGS, ETC., THAT ARE TO BE EMBEDDED IN THE CONCRETE SYSTEM.
4. ALL STAINLESS STEEL TO BE TYPE 316.

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 45054, EXPIRATION DATE: 02/09/16

Fully Sprinklered

100% Bid Documents, September 1, 2015

Additions:	Date:
Revisions:	
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DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763 631-320-1706
Hatch Mott MacDonald

STATE OF MARYLAND — C. G. CARLSON — 45054 — PROFESSIONAL ENGINEER

Approved:	*Approved: Chief, Facilities and Engineering:*
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Drawing Title: TYPICAL NOTES 1 OF 2

Project Title: POTABLE WATER SYSTEM IMPROVEMENTS – TIER 1
PERRY POINT MD
VAMC

Date: 9/1/2015

Project No: 512A5-13-329

Approved: Associate Director for Operations:

Approved: Director, Medical Center:

Scale: NONE | Building No: 103 | Checked: JCC/SNP | Drawn: CLT

Location: VAMC PERRY POINT, MD 21902

DRAWING NO: S-001

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DEPARTMENT OF VETERANS AFFAIRS

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HANGERS, STRUTS, BLOCKING AND ANCHORAGE NOTES

1. PIPING TRADE CONTRACTORS SHALL REFER TO THE APPLICABLE DIVISIONS OF THE SPECIFICATIONS FOR SUPPORTS, BLOCKING, ANCHORAGE AND RESTRAINING OF ALL PIPING, VALVES AND PIPING APPURTENANCES.
2. PIPING TRADE CONTRACTORS SHALL REVIEW WITH THE ENGINEER AND THE CONTRACTOR ALL LOCATION AND ARRANGEMENT OF PIPING OPENINGS, PIPE SLEEVES, TRENCHES, AS REQUIRED TO COMPLETE HIS WORK AND SHALL NOT PROCEED WITH INSTALLATION OF SAME UNTIL SUCH HAS BEEN REVIEWED AND WILL NOT IMPAIR THE STRUCTURAL INTEGRITY OF THE CONCRETE MEMBERS.
3. PIPE TRADE CONTRACTORS SHALL PROVIDE AND COORDINATE THE INSTALLATION OF ALL ITEMS TO BE EMBEDDED IN THE CONCRETE SYSTEM AND SHALL COOPERATE SO AS NOT TO DELAY THE CONSTRUCTION WORK. SUCH ITEMS SHALL INCLUDE PIPES, SLEEVES, BOLTS, STRUTS, HANGERS AND FITTINGS, ETC., THAT ARE TO BE EMBEDDED IN THE CONCRETE SYSTEM.
4. ALL STAINLESS STEEL TO BE TYPE 316.

STAINLESS STEEL NOTE

1. ALL STAINLESS STEEL TO BE TYPE 316. STAINLESS STEEL IS TO CONFORM TO ASTM A167 & ASTM A276. BOLTING MATERIALS ARE TO CONFORM TO ASTM A193.

ADHESIVE ANCHORING SYSTEMS

1. USE AN EPOXY ADHESIVE SUCH AS RE500 MANUFACTURED BY HILTI.
2. DIAMETER OF HOLE SHALL BE AS RECOMMENDED BY MANUFACTURER FOR THE PARTICULAR PRODUCT SPECIFIED IN THE DRAWINGS.
3. ALL POST INSTALLED ANCHORED THREADED RODS AND REBARS SHALL BE TESTED AFTER INSTALLATION AT CONTRACTORS EXPENSE. A MINIMUM OF 10% OF EACH DAYS APPLICATIONS AND NO LESS THAN 2 SHALL BE TESTED BY APPLYING A TENSION LOAD 2 TIMES THE MANUFACTURERS ALLOWABLE LOAD TO THE EMBEDDED ANCHOR. IF A TEST APPLICATION FAILS, ALL APPLICATIONS FOR THAT DAY SHALL BE TESTED. TESTING PROCEDURES AND RESULTS SHALL BE SUBMITTED AND APPROVED BY THE ENGINEER.

WATERSTOP NOTES

1. EXPANDING RUBBER WATERSTOP SHALL BE A CHEMICALLY MODIFIED NATURAL RUBBER PRODUCT WITH A HYDROPHILIC AGENT. APPROVED PRODUCT SHALL BE HYDROTITE CJ-1020-2K BY GREENSTREAK, OR EQUAL. WATERSTOPS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. ADHESIVE BETWEEN WATERSTOP AND EXISTING CONCRETE SHALL BE GREENSTREAK 7300 EPOXY BY GREENSTEAK, OR APPROVED EQUAL. ADHESIVE SHALL BE APPLIED TO BOTH CONTACT SURFACES IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. WATERSTOPS SHALL BE TERMINATED 2 INCHES FROM END OF WALL AT THE FLOOD BARRIER AND 2" FROM TOP OF WALL AT EXISTING MASONRY WALLS.
4. WATER-SWELLING SEALANT PERPENDICULAR TO THE END OF THE HYDROPHILIC WATERSTOP EXTENDING TO THE FACE OF THE WALL. SEALANT SHALL BE LEAKMASTER AS MANUFACTURED BY GREENSTREAK, OR APPROVED EQUAL.

PRECAST NOTES

1. SEE ARCHITECTURAL DWGS. FOR ADDITIONAL DETAILS.
2. CONCRETE TO HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 5000 PSI AT 28 DAYS.
3. WHERE EDGE OF OPENING IS LESS THAN 1'-0" FROM COLUMN OR BEAM FACE, EXTEND LINTEL AND PROVIDE SEAT ANGLE CONNECTION IF NOT OTHERWISE INDICATED ON STRUCTURAL DETAILS.
4. PRECAST LINTELS TO BE SET AT SAME ELEVATION AS BLOCK COURSING WITH TOP OF UNIT AN 8" MULTIPLE ABOVE FINISH GROUND FLOOR. HORIZONTAL LEGS OF A36 STEEL ANGLES TO BE CENTERED IN MORTAR JOINTS.

TYPICAL FRP NOTES

1. FIBERGLASS REINFORCED PLASTIC (FRP) MATERIALS ARE TO CONFORM TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND BE SUITABLE FOR THE INTENDED USE.
2. FRP MATERIALS ARE TO BE CORROSION RESISTANT AS MANUFACTURED BY FIBERGRATE APPROVED OR EQUAL.
3. GRATINGS AND LADDER RUNGS TO HAVE A PERMANENT INTEGRAL NON-SKID GRIT TOP SURFACE.
4. FRP GRATINGS ARE TO BE FACTORY CUT. WHERE FIELD CUTTING IS NECESSARY ENDS ARE TO BE RESIN COATED FOR MAXIMUM CORROSION RESISTANCE.

STEEL FASTENERS AND HARDWARE

1. TYPE 316 STAINLESS STEEL SHALL BE USED FOR ALL FASTENERS, PLATES, AND CONNECTORS EXPOSED TO OCEAN SALT AIR.
2. FASTENERS AND CONNECTORS USED TOGETHER SHOULD BE OF THE SAME TYPE. DO NOT MIX HOT-DIPPED GALVANIZED ITEMS WITH STAINLESS STEEL.
3. ALL INDOOR VISUALLY EXPOSED CONNECTORS AND FASTENERS SHALL BE PAINTED AND FINISHED IN ACCORDANCE WITH THE ARCHITECTURAL SPECIFICATIONS.
4. ALL NON-STAINLESS STEEL PLATES SHALL COMPLY WITH THE REQUIREMENTS OF ASTM A36.
5. BOLTS AND LAG SCREWS SHALL COMPLY WITH THE REQUIREMENTS OF ANSI/ASME STANDARD B18.2.1 GRADE 2 OR ASTM A307, GRADE 2, AND SHALL PREFERABLY BE DOME HEAD TIMBER BOLTS.
6. EDGE ANGLES, CLIP ANGLES, PLATES, BARS AND OTHER MISCELLANEOUS ROLLED SHAPES SHALL BE ASTM A-36 STRUCTURAL STEEL, U.O.N.
7. SPLIT RINGS SHALL BE MANUFACTURED FROM SAE 1010 HOT ROLLED CARBON STEEL.

STRUCTURAL STEEL NOTES

1. ALL STRUCTURAL STEEL WORK, INCLUDING DETAILING, FABRICATION AND ERECTION SHALL BE IN CONFORMANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, MANUAL OF STEEL CONSTRUCTION, THIRTEENTH EDITION, EXCEPT AS HEREIN MODIFIED BY THE CONTRACT DRAWINGS AND SPECIFICATIONS.
2. ALL STRUCTURAL STEEL WIDE FLANGE SHAPES (W SHAPES) SHALL BE NEW STEEL, CLEAN AND STRAIGHT, AND SHALL CONFORM TO ASTM SPECIFICATION A992-02 GRADE 50, EXCEPT AS NOTED.
3. WHERE INDICATED, PIPE AND TUBE SHALL CONFORM TO THE FOLLOWING: HSS RECT - ASTM A500-GR.B Fy=46; HSS ROUND - ASTM A500-GR.B Fy=42; PIPE - ASTM A53-GR.B.
4. WHERE SHOWN - M, S, C, MC AND L SHAPES SHALL BE ASTM A36 MATERIAL. HP SHAPES SHALL BE A572-GR.50.
5. ALL SHOP CONNECTIONS SHALL BE MADE WITH WELDS OR HIGH STRENGTH BOLTS. ALL FIELD CONNECTIONS SHALL BE MADE WITH HIGH STRENGTH BOLTS. BOTH SHOP AND FIELD CONNECTIONS SHALL CONFORM TO THE TYPICAL CONNECTION DETAILS SHOWN ON THE CONTRACT DRAWINGS UNLESS SPECIFICALLY MODIFIED BY THE ENGINEER.
6. ALL HIGH STRENGTH BOLTS SHALL BE 3/4" DIAMETER FRICTION TYPE BOLTS CONFORMING TO ASTM A 325-02. PROVIDE A HARDENED WASHER UNDER THE TURNED ELEMENT (NUT OR BOLT HEAD). BOLTS AND NUTS TO BE "MADE IN THE USA".
7. THE INSTALLATION AND TIGHTENING OF ALL HIGH STRENGTH BOLTS SHALL CONFORM TO THE "SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325-02 BOLTS-ERECTION SHALL USE THE CALIBRATED WRENCH METHOD OF INSTALLATION.
8. ALL ANCHOR BOLTS SHALL BE ASTM F1554-GR.36, UNLESS OTHERWISE NOTED.
9. ALL WELDING PROCEDURES SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION.
10. ALL STRUCTURAL STEEL SHALL BE PAINTED AS PER THE SPECIFICATIONS. ALL FABRICATION AND ERECTION MARKS SHALL BE COVERED DURING THE FIELD PAINTING TOUCH-UP OPERATIONS.
11. FOR MISCELLANEOUS STEEL REQUIREMENTS, SEE THE ARCHITECTURAL CONTRACT DRAWINGS.
12. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY STEEL LINTELS OF THE REQUIRED SIZES AND SHAPES, FOR ALL OPENINGS IN EXTERIOR AND INTERIOR MASONRY WALLS. LINTELS FURNISHED SHALL INCLUDE THOSE REQUIRED FOR HVAC DUCTWORK, LOUVERS AND EQUIPMENT. ALL LINTELS IN EXTERIOR WALLS SHALL BE GALVANIZED.
13. PROVIDE HOLES FOR WOOD BLOCKING AS SHOWN ON THE ARCHITECTURAL CONTRACT DRAWINGS.
14. ALL STEEL COLUMNS SHALL BE MILLED TO BEAR AT BASEPLATES, AND CAP PLATES.
15. ALL CLIP ANGLES USED SHALL BE A MINIMUM OF 6" LONG AND HAVE A MINIMUM THICKNESS OF 3/8" UNLESS NOTED OTHERWISE.
16. STEEL JOIST CONSTRUCTION, INCLUDING MATERIALS, DESIGN AND MANUFACTURE, APPLICATION, HANDLING AND ERECTION, SHALL CONFORM TO THE LATEST SPECIFICATIONS OF THE STEEL JOIST INSTITUTE.
17. ALL STRUCTURAL STEEL SHALL BE HOT-DIP GALVANIZED. ZINC IS TO CONFORM TO ASTM B6. ALL GALVANIZING IS TO BE DONE BY THE HOT-DIP PROCESS TO CONFORM TO ASTM A123-08 AND AMERICAN HOT DIP GALVANIZERS ASSOCIATION, INC. THE COATING SHALL HAVE AN AVERAGE WEIGHT OF 2.0 OUNCES PER SQUARE FOOT.

METAL DECK NOTES

1. METAL DECK SHALL CONFORM TO THE AMERICAN IRON AND STEEL INSTITUTE'S "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS".
2. METAL DECK SHALL BE GALVANIZED. SEE THE SPECIFICATIONS.
3. METAL DECK SHALL BE CAPABLE OF SUPPORTING ALL CONSTRUCTION LOADS, AS PER "STEEL DECK INSTITUTE GUIDE TO FLOOR DECK AND ROOF DECK. (30 PSF MINIMUM CONSTRUCTION LOADING).
4. METAL DECK SHALL HAVE NESTING SIDE LAPS AND BE MECHANICALLY FASTENED AT THE CENTERLINE OF EACH SPAN, OR AT 3'-0" ON CENTER, WHICHEVER IS THE LESSER DIMENSION, WITH 3/4" LONG #10 TEK SELF-DRILLING SCREWS.
5. METAL DECK SHALL SPAN A MINIMUM OF THREE (3) SPANS.
6. CONFORM TO THE STEEL DECK INSTITUTES RECOMMENDED SPECIFICATIONS.
   - 6.1.1. CONNECT DECK TO THE STEEL MEMBERS USING HILTI X-ENP-19 FASTENERS AS REQUIRED AND CORRESPONDING INSTALLATION TOOL WITH SUFFICIENT ACTUATION TO DRIVE FASTENERS COMPLETELY THROUGH GIVEN FLANGE THICKNESS.
7. CEILING DUCTS AND LIGHT FIXTURES MAY BE HUNG FROM DECK. DO NOT HANG ANY OTHER ITEMS FROM DECK. NO SINGLE CONCENTRATED LOAD SHALL EXCEED 60 LBS AND NO UNIFORM LOAD SHALL EXCEED 10 PSF.
8. SUBMIT STEEL SHOP DRAWINGS AND STEEL DECK DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO FABRICATION.

ALUMINUM NOTES

1. ALUMINUM ALLOY MEMBERS, FABRICATION THEREOF, AND ERECTION OF, SHALL CONFORM TO "SPECIFICATIONS FOR ALUMINUM STRUCTURES" BY THE ALUMINUM ASSOCIATION, LATEST EDITION, UNLESS NOTED OTHERWISE.
2. ALUMINUM ALLOY FOR ALL ROLLED SECTIONS, PLATES AND ANGLES SHALL BE ALLOY 6061-T6, UNLESS OTHERWISE SPECIFIED.
3. ALUMINUM ALLOY FOR PIPE SHALL BE ALLOY 6061-T6 UNLESS OTHERWISE SPECIFIED.
4. ALUMINUM ALLOY FOR GRATING SHALL BE ALLOY 6061-T6 UNLESS OTHERWISE SPECIFIED.
5. ALL FASTENINGS BETWEEN ALUMINUM MEMBERS AND DISSIMILAR METALS SHALL BE MADE WITH STAINLESS STEEL BOLTS UNLESS OTHERWISE NOTED. ALL CONTACT SURFACES OF ALL MEMBERS SHALL BE PAINTED WITH ZINC CHROMATE PRIMER.
6. ALL ALUMINUM SURFACES TO BE PLACED IN CONTACT WITH WOOD, CONCRETE, OR MASONRY SHALL BE GIVEN A HEAVY COAT OF AN ALKALI RESISTANT BITUMASTIC PAINT.

ELECTRICAL CONDUIT & GROUNDING NOTES

1. THE ELECTRICAL TRADE CONTRACTOR SHALL REVIEW WITH THE ENGINEER AND THE CONTRACTOR HIS PROPOSED LOCATION AND METHOD OF INSTALLATION OF CONDUITS IN CONCRETE CONSTRUCTION AND SHALL NOT PROCEED WITH INSTALLATION OF SAME UNTIL ARRANGEMENT OF CONDUITS AND OPENINGS HAS BEEN AGREED UPON.
2. NO CONDUITS SHALL BE SO LOCATED OR INSTALLED WHERE THEY WILL IMPAIR THE STRUCTURAL INTEGRITY OF THE CONCRETE OR CMU MEMBERS.
3. NO CONDUIT WITH AN OUTSIDE DIAMETER LARGER THAN ONE-THIRD OF THE CONCRETE SLAB THICKNESS WILL BE PERMITTED TO BE INSTALLED WITHIN THE SLAB SYSTEM.
4. ALL CONDUIT CROSS-OVERS SHALL BE SO LOCATED SO THEY DO NOT VERTICALLY DISPLACE ANY MAIN REINFORCING BARS OR OTHERWISE IMPAIR THE STRUCTURAL INTEGRITY OF THE FRAMING SYSTEM (SEE NOTE 1).
5. ALL CONDUITS SHALL BE SPACED A MINIMUM OF THREE CONDUIT DIAMETERS CENTER TO CENTER. LARGER SPACING OF CONDUIT IS PREFERRED.
6. CONTINUOUS ROWS OF CONDUIT SHALL NOT BE PLACED PARALLEL TO THE BEARING EDGES OF CONCRETE SLABS WITHIN A DISTANCE EQUAL TO THE SLAB THICKNESS FROM THE FACE OF THE BEARING EDGE.
7. ALL CONDUIT ENCASED IN CONCRETE SHALL BE IRON OR STEEL (UNCOATED OR GALVANIZED) NOT THINNER THAN STANDARD SCHEDULE 40 STEEL PIPE, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
8. CONDUITS SHALL NOT BE PERMITTED TO BE PLACED IN THE CELLS OF A CMU WALL.
9. THE BUILDING ELECTRICAL GROUNDING SYSTEM SHALL BE BONDED TO THE FOUNDATION REBAR IN ACCORDANCE WITH THE REQUIREMENTS OF N.J.A.C. 5:23-3.4 AND NEC 2002, SECTION 250-52(AX3). CONTRACTOR SHALL COORDINATE WITH PROJECT ELECTRICAL DRAWINGS FOR REQUIREMENTS. ATTACHMENT OF ELECTRICAL GROUNDING SYSTEM TO FOUNDATION REBAR SHALL BE MADE PRIOR TO PLACEMENT OF CONCRETE FOR THE FOUNDATION.

DESIGN LOADS CRITERIA

NOTE:

IT SHALL BE UNLAWFUL TO PLACE, OR CAUSE TO PERMIT TO BE PLACED, ON ANY FLOOR OR ROOF OF A BUILDING, STRUCTURE, OR PORTION THEREOF, A LOAD GREATER THAN IS PERMITTED BY THESE REQUIREMENTS.

1. GENERAL INFORMATION:

IBC BUILDING CLASSIFICATION: CATEGORY IV
SITE EXPOSURE CATEGORY: C

2. DEAD LOADS:

STRUCTURES - ACTUAL WEIGHT
WEIGHT OF SOIL - 120 PCF FOR RESISTING UPLIFT
WEIGHT OF SOIL - 125 PCF FOR DEAD LOAD
EQUIVALENT LIQUID PRESSURE: 60 PSF

3. LIVE LOADS:

SLAB AT ELEVATION 70.83: 20 PSF
GROUND FLOOR: 250 PSF (OR EQ. WEIGHT)
INTERIOR EAST MEZZANINE FLOOR: 250 PSF
INTERIOR SOUTHWEST MEZZANINE FLOOR: 250 PSF

SNOW:
GROUND: 25 PSF
ROOF: 23 PSF
SNOW EXPOSURE: Ce = 0.9
SNOW IMPORTANCE : Is = 1.20
THERMAL FACTOR: Ct = 1.1

4. WIND LOADS:

BASIC WIND SPEED: 120 MPH
WIND LOAD IMPORTANCE FACTOR: 1.00
WIND EXPOSURE: C
WIND DIRECTIONALITY = 0.85 FACTOR, Kd
TOPOGRAPHIC FACTOR, Kzt = 1.00
GUST EFFECT FACTOR, G = 0.85
INTERNAL PRESSURE COEFF: ±0.18

5. EARTHQUAKE DESIGN DATA:

SEISMIC IMPORTANCE FACTOR, Ie: 1.50
SPECTRAL RESPONSE ACCELERATIONS: Ss: 0.164g, S_1: 0.055g
SITE CLASS : D
SPECTRAL RESPONSE ACCELERATIONS: Sds: 0.175g, Sd1: 0.089g
SEISMIC DESIGN CATEGORY: C
SEISMIC FORCE RESISTING SYSTEM: STEEL ORDINARY CONCENTRICALLY BRACED FRAMES [BUILDING]
SEISMIC FORCE RESISTING SYSTEM: ORDINARY REINFORCED MASONRY SHEAR WALLS [ALL INTERIOR MEZZANINE]
DESIGN BASE SHEAR: 157 KIP [BUILDING]; 51 KIP [INTERIOR EAST MEZZANINE]; 16 KIP [INTERIOR SOUTHWEST MEZZANINE]
SEISMIC RESPONSE COEFFICIENT Cs: 0.081 [BUILDING]; 0.131 [INTERIOR MEZZANINE]
RESPONSE MODIFICATION FACTOR: R: 3.25 [BUILDING; 2 [INTERIOR MEZZANINE]
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE ANALYSIS

6. GEOTECHNICAL INFORMATION:

ALLOWABLE BEARING PRESSURE OF SOIL: 3,000 PSF (AS PER GEOTECHNICAL REPORT)
DEPTH TO FROST: 32" MINIMUM

7. BLAST DESIGN CRITERIA:

VA PHYSICAL SECURITY DESIGN MANUAL FOR MISSION CRITICAL FACILITIES
(FINAL DRAFT - 2007)

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 45054, EXPIRATION DATE: 02/09/16

Fully Sprinklered

100% Bid Documents, September 1, 2015

Additions:	Date:
Revisions:	
-	-
-	-
-	-
-	-
-	-
-	-

DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763
631-320-1706
Hatch Mott MacDonald

STATE OF MARYLAND — JOSEPH C. CARROLL — 45054 — PROFESSIONAL ENGINEER

Approved:	Approved: Chief, Facilities and Engineering:
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Drawing Title: TYPICAL 2 OF 2

Project Title: POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1
PERRY POINT MD
VAMC

Date: 9/1/2015

Project No: 512A5-13-329

Approved: Associate Director for Operations:

Approved: Director, Medical Center:

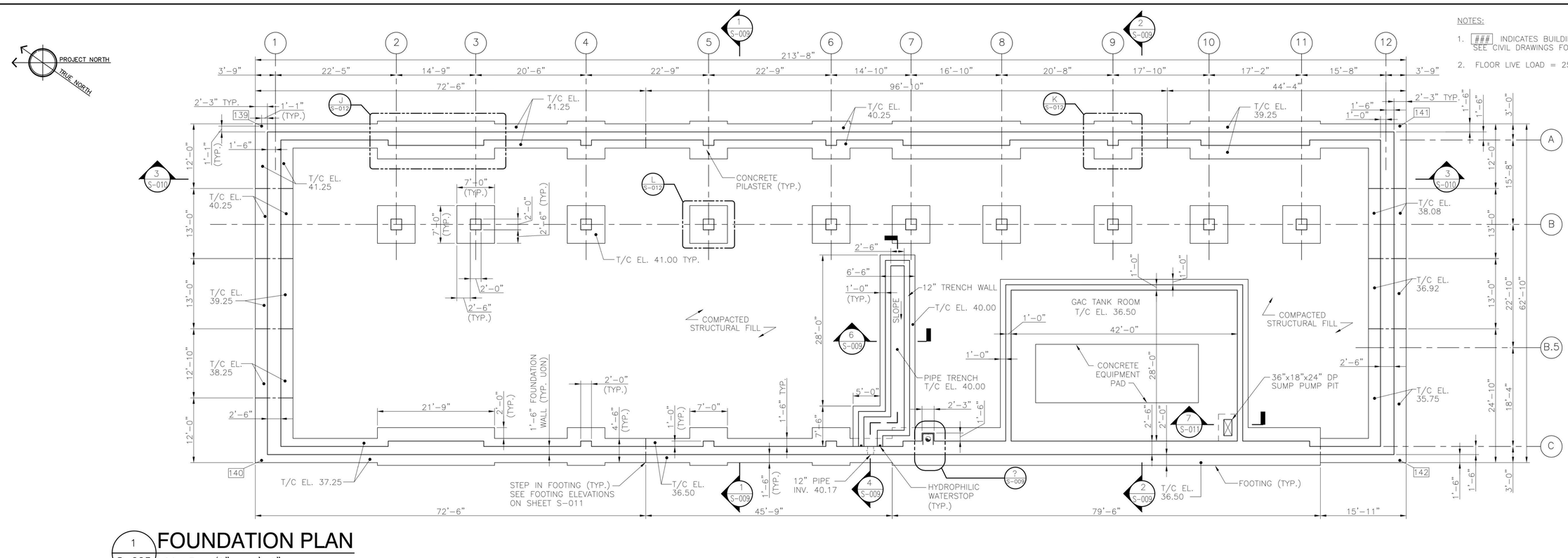
Scale: NONE | Building No: 103 | Checked: JCC/SNP | Drawn: CLT

Location: VAMC PERRY POINT, MD 21902

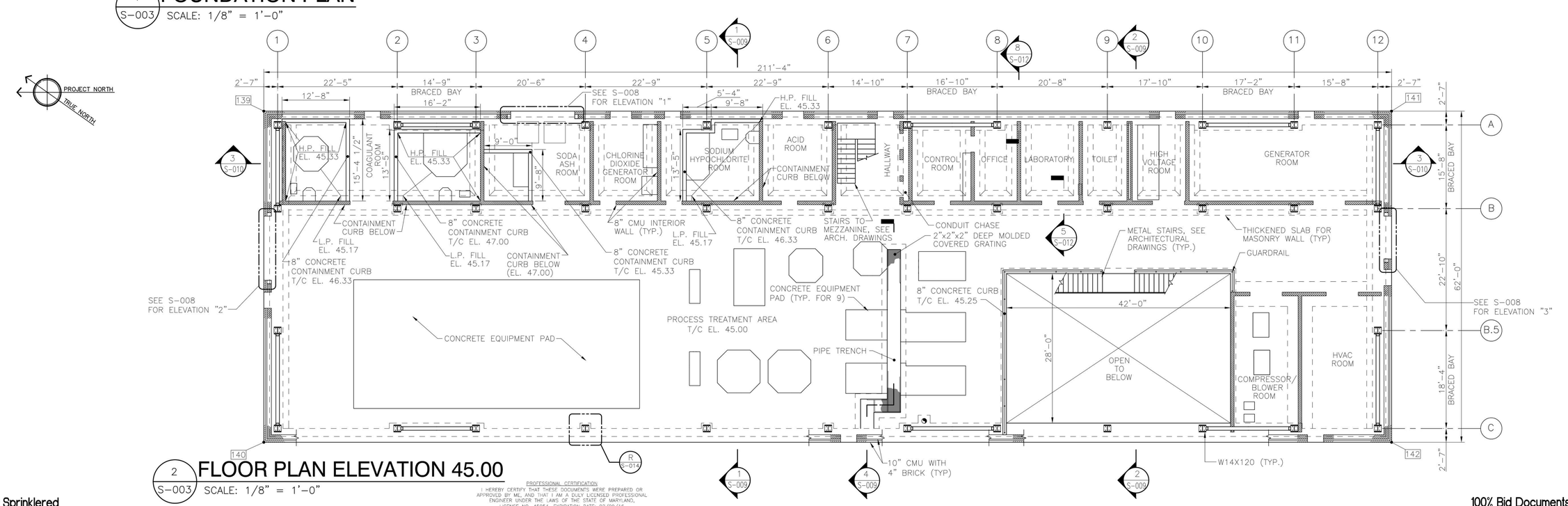
DRAWING NO: S-002

37 OF 124

DEPARTMENT OF VETERANS AFFAIRS



1 S-003 **FOUNDATION PLAN**
SCALE: 1/8" = 1'-0"



2 S-003 **FLOOR PLAN ELEVATION 45.00**
SCALE: 1/8" = 1'-0"

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 45054, EXPIRATION DATE: 02/09/16

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100% Bid Documents, September 1, 2015

Additions:	Date:
Revisions:	

DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763 631-320-1706
Hatch Mott MacDonald

STATE OF MARYLAND — JOSEPH C. CARUSO — 45054 — PROFESSIONAL ENGINEER

Approved:	Approved: Chief, Facilities and Engineering:
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Approved: Director, Medical Center:

Drawing Title: FOUNDATION PLAN AND FLOOR PLAN EL. 45.00

Approved: Associate Director for Operations:

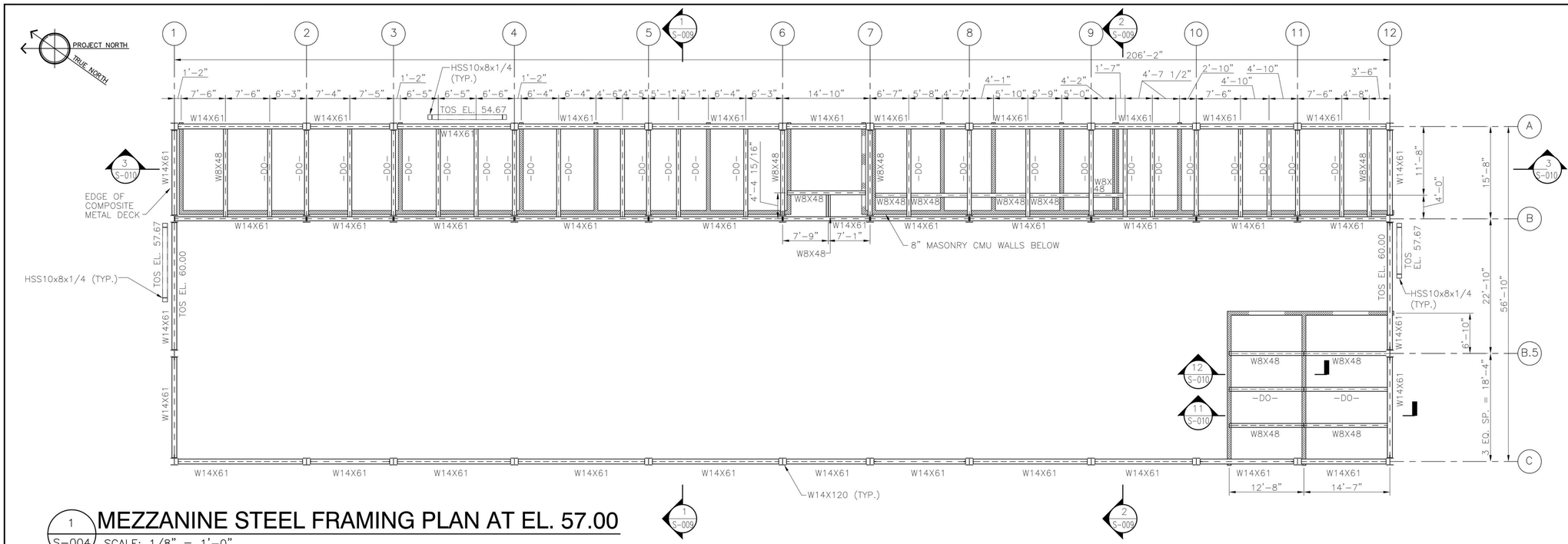
Project Title: POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1
PERRY POINT MD
VAMC

Scale:	Building No:	Checked:	Drawn:
1/8" = 1'-0"	103	JCC/SNP	CLT

Location: VAMC PERRY POINT, MD 21902

Date: 9/1/2015
Project No: 512A5-13-329
DRAWING NO: S-003
38 OF 124

DEPARTMENT OF VETERANS AFFAIRS

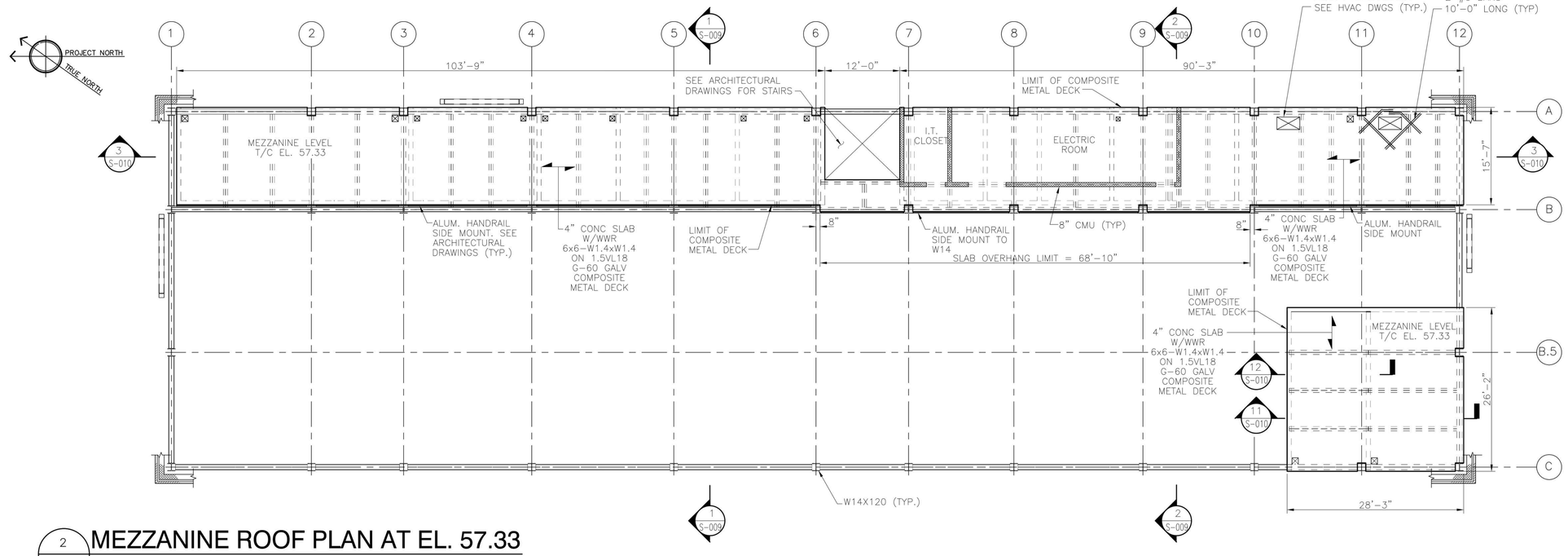


NOTES:

1. MEZZANINE LIVE LOAD = 250 PSF
2. MEZZANINE MAX SPAN = 7'-6"
3. METAL DECK SHALL BE FASTENED TO STEEL MEMBERS WITH POWDER ACTUATED FASTENERS BY HILTI X-ENP-19 L15 ON A 36/4 PATTERN WITH (1) #10 SIDELAP SCREW PER PANEL.
4. COORDINATE WITH H&V DRAWINGS FOR MEZZANINE PENETRATIONS.

1 S-004 MEZZANINE STEEL FRAMING PLAN AT EL. 57.00

SCALE: 1/8" = 1'-0"



2 S-004 MEZZANINE ROOF PLAN AT EL. 57.33

SCALE: 1/8" = 1'-0"

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Additions:	Date:
Revisions:	

DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763
631-320-1706
Hatch Mott MacDonald

Approved:

Approved: Chief, Facilities and Engineering:

Approved: Associate Chief for Maintenance And Operations, Perry Point:

Approved: Engineering Projects Supervisor

Approved: Infection Control Officer

Approved: Associate Director for Operations:

Approved: Director, Medical Center:

Drawing Title: MEZZANINE STEEL FRAMING PLAN EL. 57.00 AND DECKING PLAN EL. 57.33

Project Title: POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1
PERRY POINT MD
VAMC

Scale: 1/8" = 1'-0" | Building No: 103 | Checked: JCC/SNP | Drawn: CLT

Location: VAMC PERRY POINT, MD 21902

Date: 9/1/2015

Project No: 512A5-13-329

DRAWING NO: S-004

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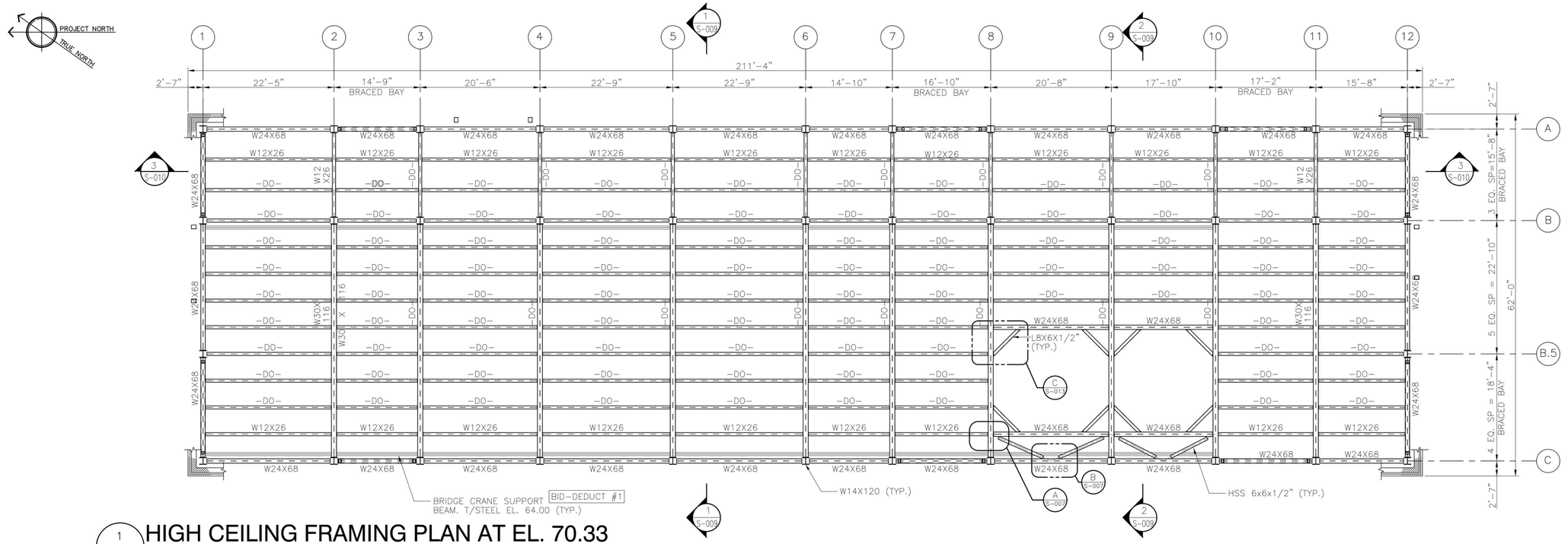
DEPARTMENT OF VETERANS AFFAIRS

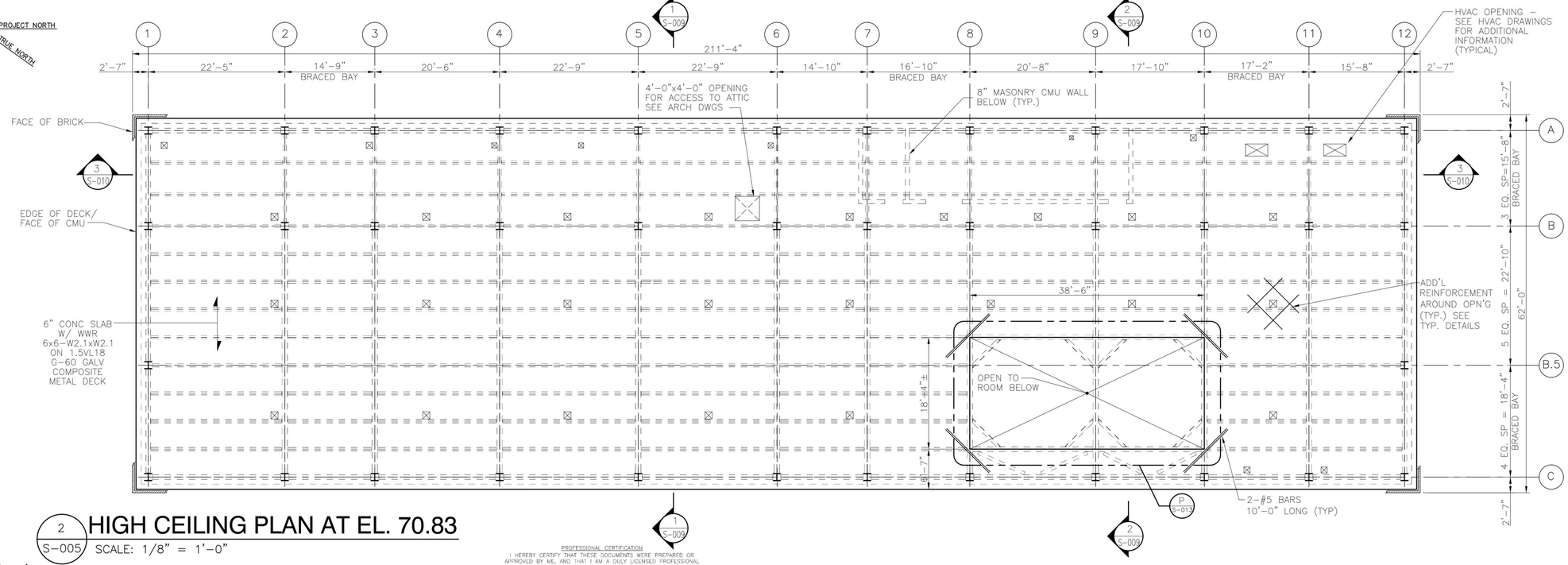


1 S-005 HIGH CEILING FRAMING PLAN AT EL. 70.33

SCALE: 1/8" = 1'-0"

NOTES:

1. LIVE LOAD = 20 PSF
2. METAL DECK SHALL BE FASTENED TO STEEL MEMBERS WITH POWDER ACTUATED FASTENERS BY HILTI X-ENP-19 L15 ON A 36/4 PATTERN WITH (1) #10 SIDELAP SCREW PER PANEL.
3. COORDINATE WITH H&V DRAWINGS FOR CEILING PENETRATIONS.
4. SEE S-015 FOR TYPICAL STEEL CONNECTION DETAILS.



2 S-005 HIGH CEILING PLAN AT EL. 70.83

SCALE: 1/8" = 1'-0"

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 45054, EXPIRATION DATE: 02/09/16

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DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763
631-320-1706
Hatch Mott MacDonald

STATE OF MARYLAND — JOSEPH C. CHELEN — 45054 — PROFESSIONAL ENGINEER

Approved:	Approved: Chief, Facilities and Engineering:
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Approved: Director, Medical Center:

Approved: Associate Director for Operations:

Drawing Title: CEILING STEEL FRAMING PLAN EL. 70.33 AND DECKING PLAN EL. 70.83

Project Title: POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1
PERRY POINT MD
VAMC

Location: VAMC PERRY POINT, MD 21902

Scale:	Building No:	Checked:	Drawn:
1/8" = 1'-0"	103	JCC/SNP	CLT

Date: 9/1/2015

Project No: 512A5-13-329

DRAWING NO: S-005

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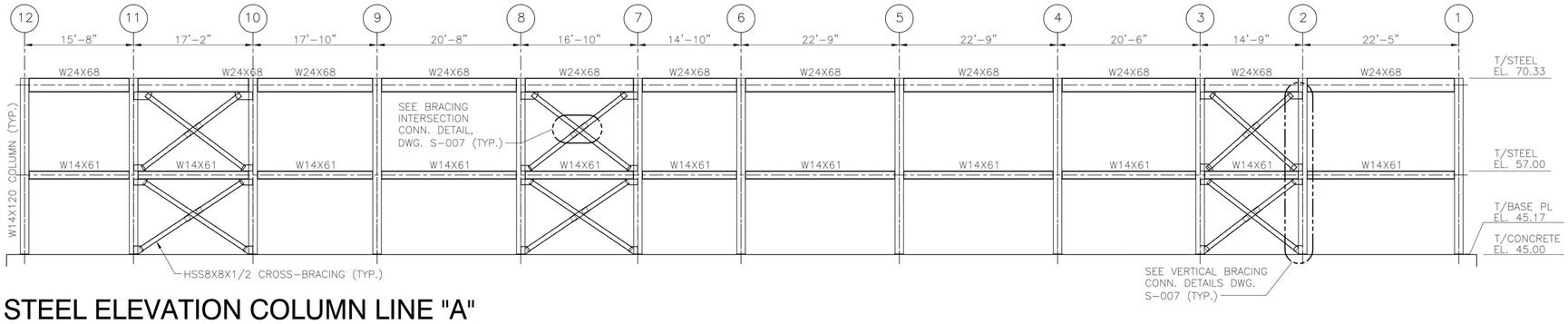
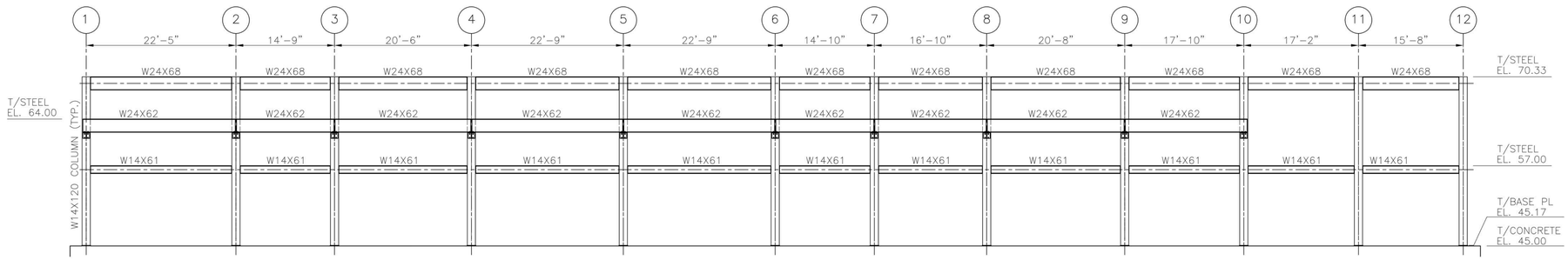
DEPARTMENT OF VETERANS AFFAIRS



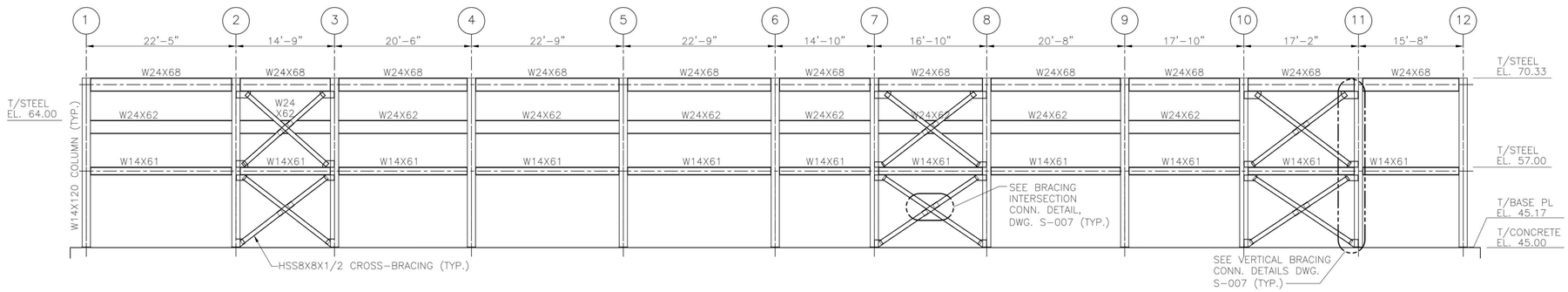
STEEL ELEVATION COLUMN LINE "A"

SCALE: 1/8" = 1'-0"



STEEL ELEVATION COLUMN LINE "B"

SCALE: 1/8" = 1'-0"



STEEL ELEVATION COLUMN LINE "C"

SCALE: 1/8" = 1'-0"

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Fully Sprinklered

100% Bid Documents, September 1, 2015

Additions:	Date:
Revisions:	
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-	-
-	-
-	-
-	-
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DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763 631-320-1706
Hatch Mott MacDonald

STATE OF MARYLAND — JOSEPH C. CARUSO — 45054 — PROFESSIONAL ENGINEER

Approved:	Approved: Chief, Facilities and Engineering:
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Approved: Director, Medical Center:

Approved: Associate Director for Operations:

Drawing Title: STEEL ELEVATIONS I

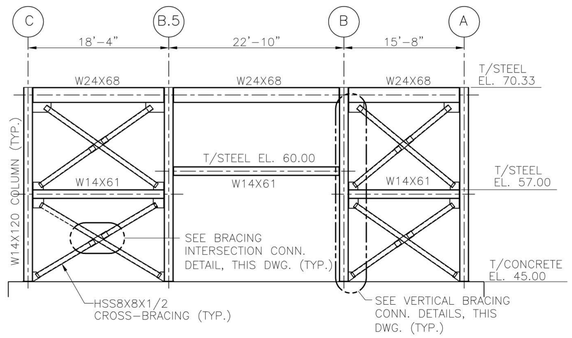
Project Title: POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1
PERRY POINT MD
VAMC

Location: VAMC PERRY POINT, MD 21902

Scale:	Building No:	Checked:	Drawn:
1/8" = 1'-0"	103	JCC/SNP	CLT

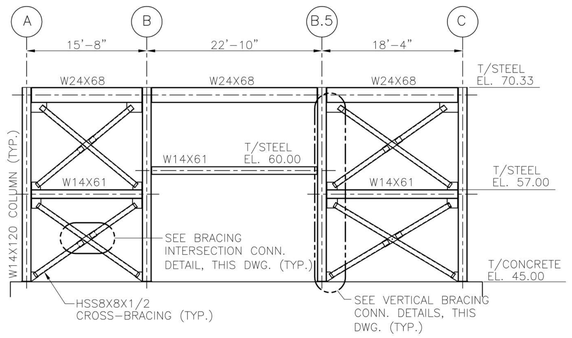
Date: 9/1/2015
Project No: 512A5-13-329
DRAWING NO: S-006
41 OF 124

DEPARTMENT OF VETERANS AFFAIRS



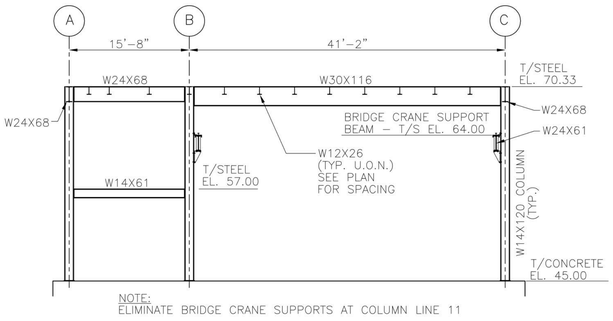
STEEL ELEVATION COLUMN LINE 1

SCALE: 1/8" = 1'-0"



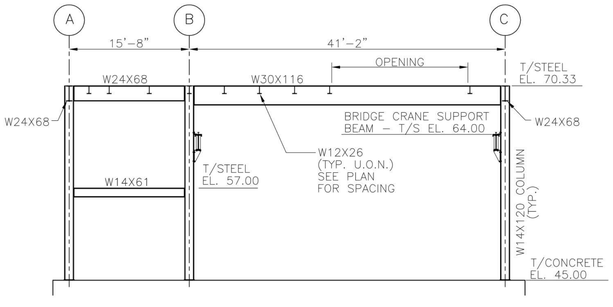
STEEL ELEVATION COLUMN LINE 12

SCALE: 1/8" = 1'-0"



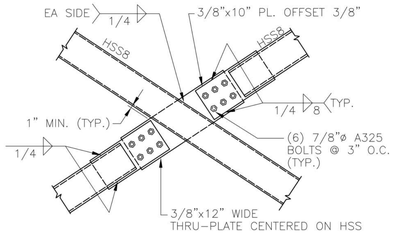
STEEL ELEVATION COLUMN LINES 2-8, 10 & 11

SCALE: 1/8" = 1'-0"



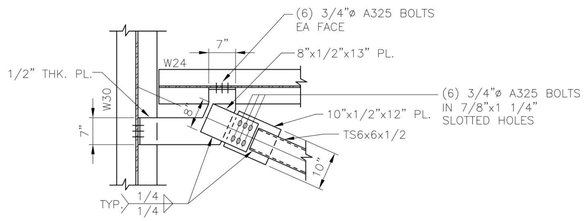
STEEL ELEVATION COLUMN LINE 9

SCALE: 1/8" = 1'-0"



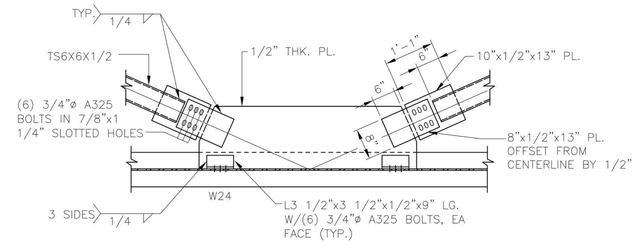
BRACING INTERSECTION DETAIL

SCALE: 3/4" = 1'-0"



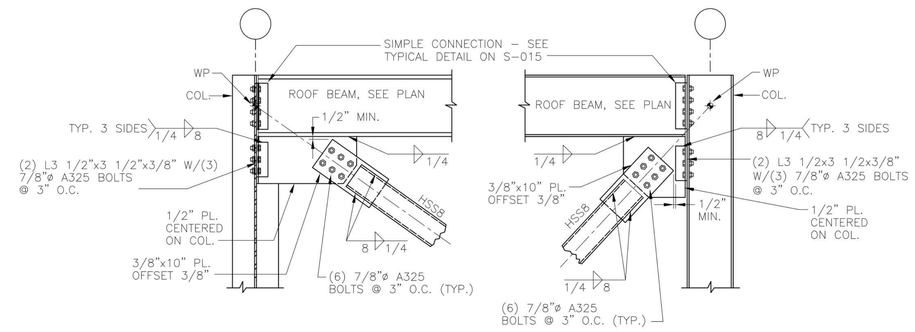
A DETAIL

S-005 SCALE: 3/4" = 1'-0"



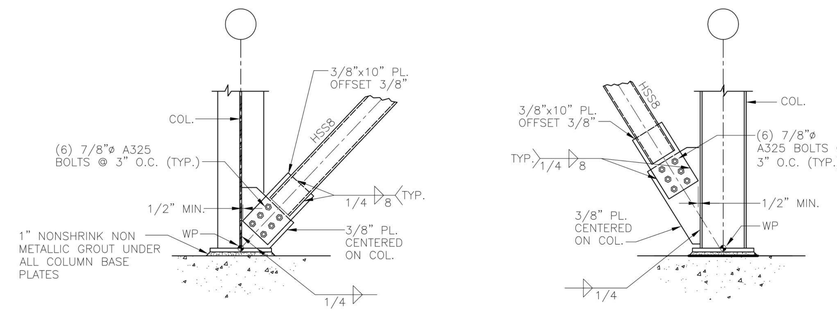
B DETAIL

S-005 SCALE: 3/4" = 1'-0"



VERTICAL BRACING CONNECTION AT COL. FLANGE

SCALE: 3/4" = 1'-0"



VERTICAL BRACING CONNECTION AT COL. FLANGE BASE

SCALE: 3/4" = 1'-0"

Fully Sprinklered

100% Bid Documents, September 1, 2015

Additions:	Date:
Revisions:	
-	-
-	-
-	-
-	-
-	-
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DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763
631-320-1706
Hatch Mott MacDonald

STATE OF MARYLAND — ANTHONY C. CECERE — 45054 — PROFESSIONAL ENGINEER

Approved:	Approved: Chief, Facilities and Engineering:
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Approved: Director, Medical Center:

Drawing Title: STEEL ELEVATIONS II

Project Title: POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1
PERRY POINT MD
VAMC

Approved: Associate Director for Operations:

Scale:	Building No:	Checked:	Drawn:
AS NOTED	103	JCC/SNP	CLT

Location: VAMC PERRY POINT, MD 21902

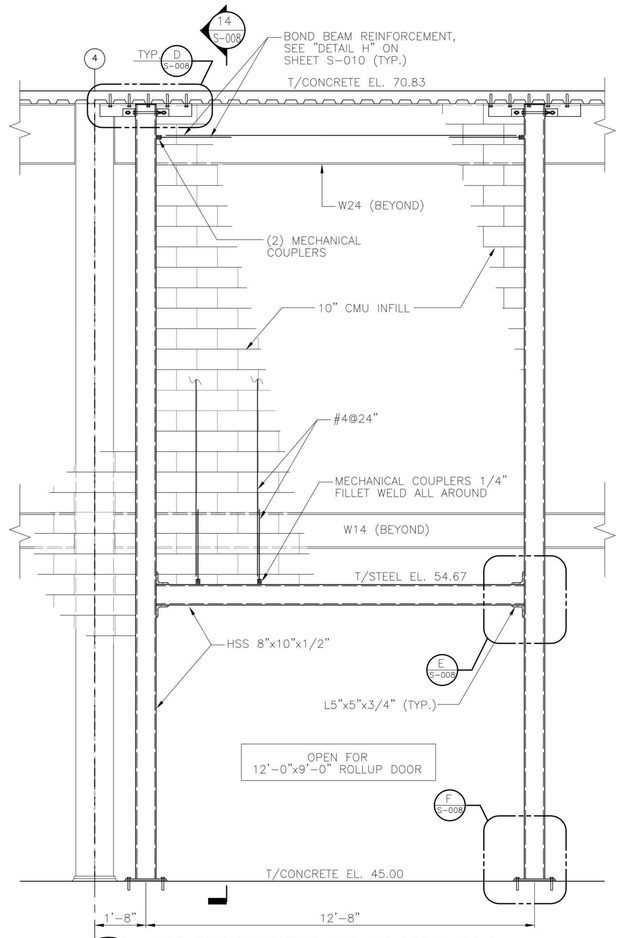
Date: 9/1/2015

Project No: 512A5-13-329

DRAWING NO: S-007

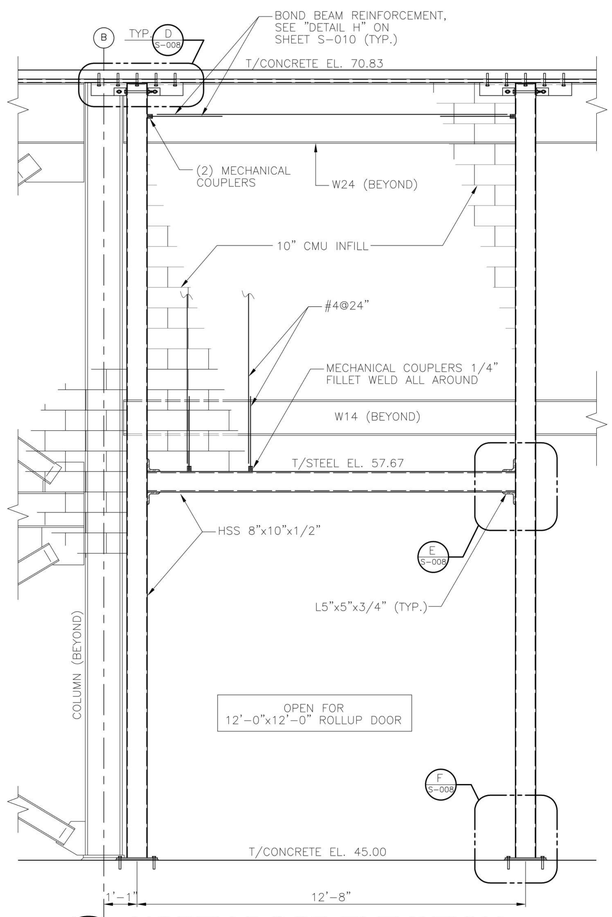
42 OF 124

DEPARTMENT OF VETERANS AFFAIRS



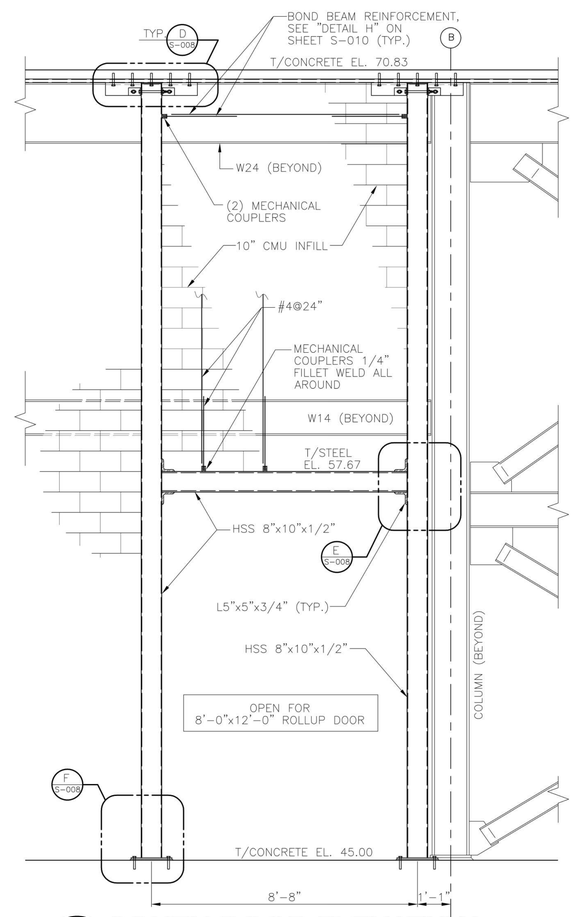
1 S-003 EAST DOOR ELEVATION

SCALE: 1/2" = 1'-0"



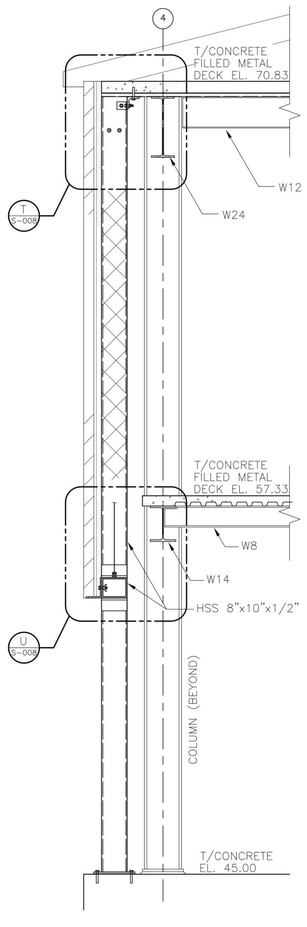
2 S-003 NORTH DOOR ELEVATION

SCALE: 1/2" = 1'-0"



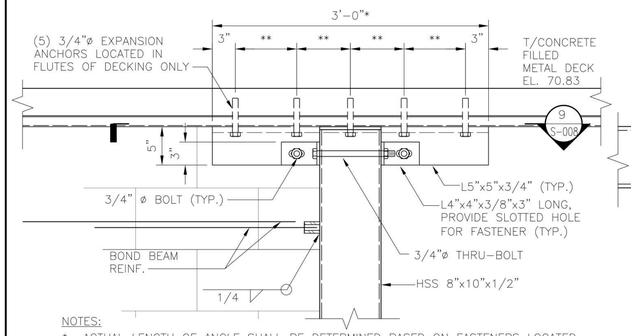
3 S-003 SOUTH DOOR ELEVATION

SCALE: 1/2" = 1'-0"



14 S-008 SECTION

SCALE: 1/2" = 1'-0"



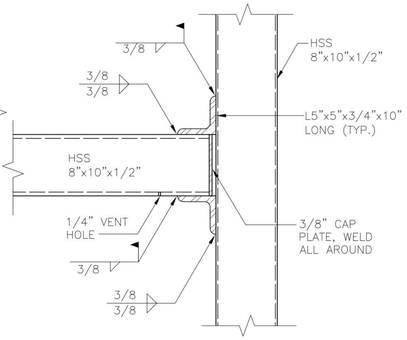
NOTES:

* ACTUAL LENGTH OF ANGLE SHALL BE DETERMINED BASED ON FASTENERS LOCATED IN CENTER OF DECK FLUTES PLUS 3" ON EACH END.

** SPACING OF FASTENERS SHALL BE DETERMINED BASED ON CENTER TO CENTER DISTANCE OF DECK FLUTES. NO ANCHOR SHALL BE CLOSER THAN 6 INCHES.

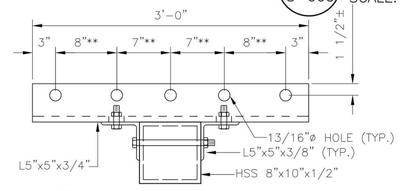
D S-008 DETAIL

SCALE: 1 1/2" = 1'-0"



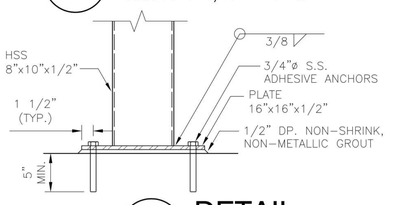
E S-008 DETAIL

SCALE: 1 1/2" = 1'-0"



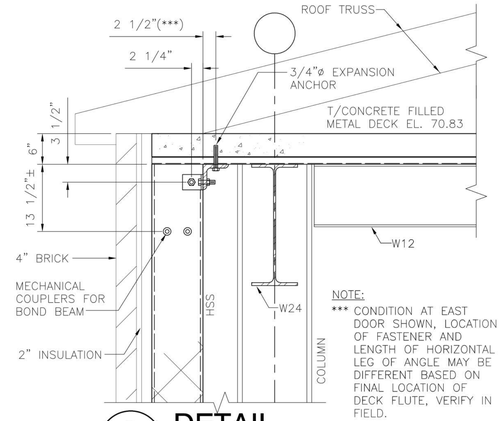
9 S-008 SECTION

SCALE: 1 1/2" = 1'-0"



F S-008 DETAIL

SCALE: 1 1/2" = 1'-0"

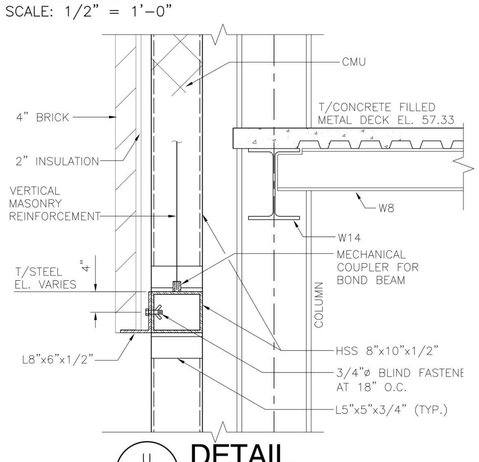


NOTE:

*** CONDITION AT EAST DOOR SHOWN, LOCATION OF FASTENER AND LENGTH OF HORIZONTAL LEG OF ANGLE MAY BE DIFFERENT BASED ON FINAL LOCATION OF DECK FLUTE, VERIFY IN FIELD.

T S-008 DETAIL

SCALE: 1" = 1'-0"



U S-008 DETAIL

SCALE: 1" = 1'-0"

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 45054, EXPIRATION DATE: 02/09/16

Fully Sprinklered

100% Bid Documents, September 1, 2015

Additions:	Date:
Revisions:	-
-	-
-	-
-	-
-	-
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DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763
631-320-1706
Hatch Mott MacDonald

STATE OF MARYLAND — KEITH C. CACCIOLA — 45054 — PROFESSIONAL ENGINEER

Approved:	Approved: Chief, Facilities and Engineering:
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Approved: Director, Medical Center:

Approved: Associate Director for Operations:

Drawing Title: STEEL ELEVATIONS III AND DETAILS

Project Title: POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1
PERRY POINT MD
VAMC

Location: VAMC PERRY POINT, MD 21902

Scale:	Building No:	Checked:	Drawn:
AS NOTED	103	JCC/SNP	CLT

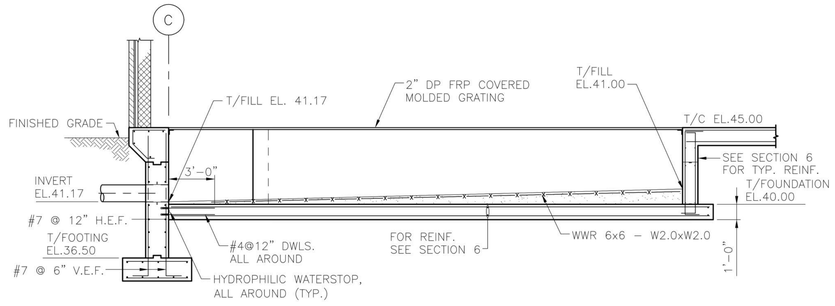
Date: 9/1/2015

Project No: 512A5-13-329

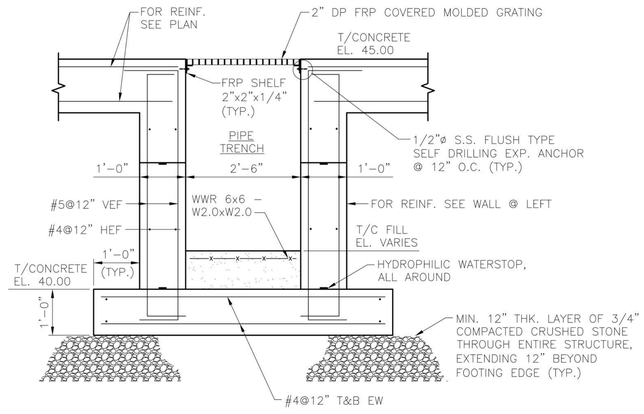
DRAWING NO: S-008

43 OF 124

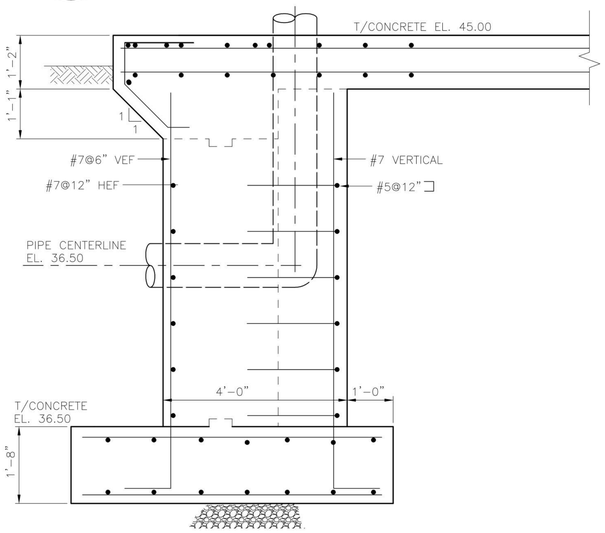
DEPARTMENT OF VETERANS AFFAIRS



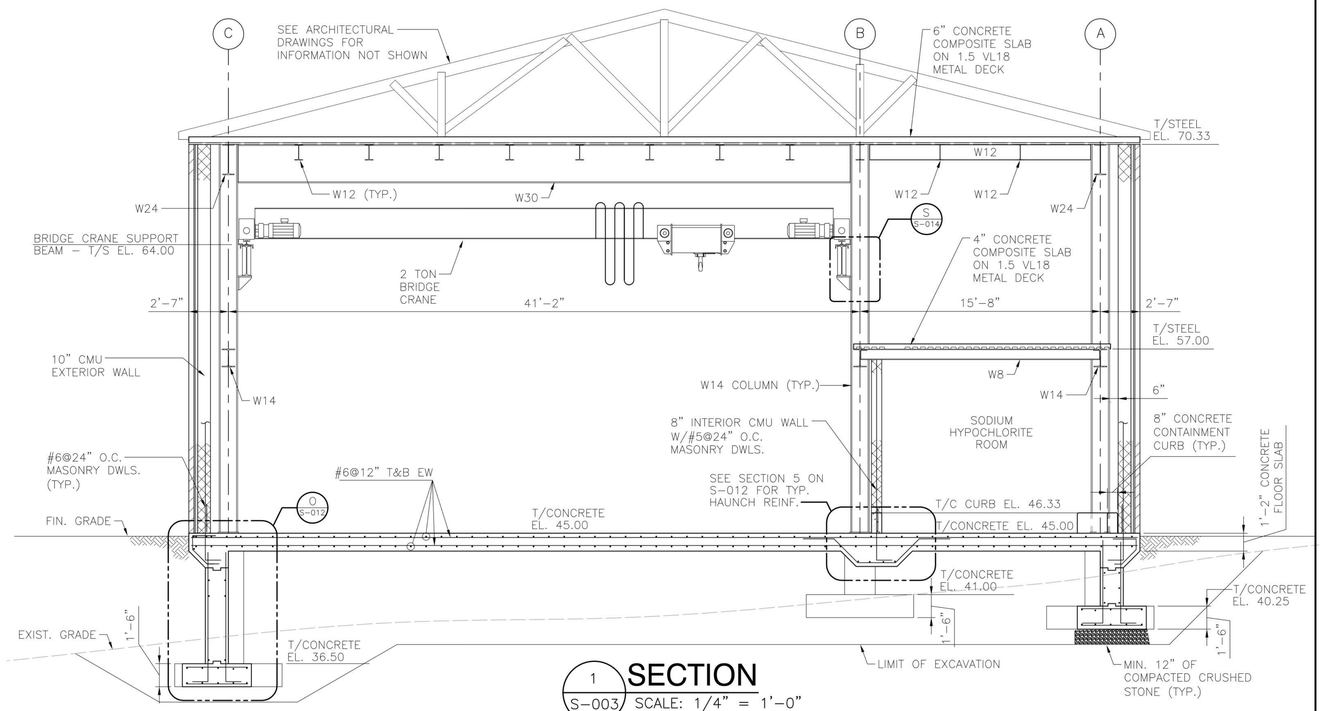
4 S-003 **SECTION** SCALE: 1/4" = 1'-0"



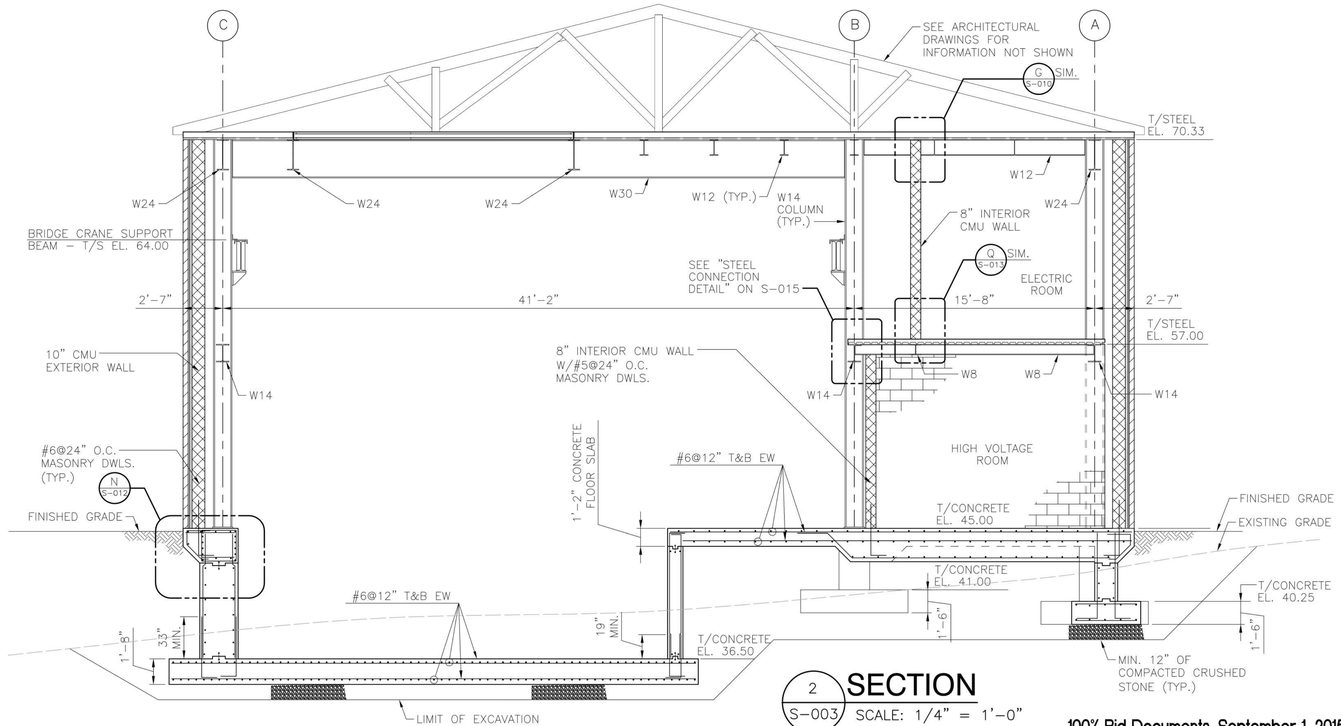
6 S-003 **SECTION** SCALE: 3/4" = 1'-0"



? S-003 **SECTION** SCALE: 3/4" = 1'-0"



1 S-003 **SECTION** SCALE: 1/4" = 1'-0"



2 S-003 **SECTION** SCALE: 1/4" = 1'-0"

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Additions:	Date:
Revisions:	
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DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763
631-320-1706
Hatch Mott MacDonald

STATE OF MARYLAND · JOSEPH C. CARELLA · 45054 · PROFESSIONAL ENGINEER

Approved:	*Approved: Chief, Facilities and Engineering:*
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Drawing Title: SECTIONS I

Approved: Associate Director for Operations:

Approved: Director, Medical Center:

Project Title: POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1
PERRY POINT MD
VAMC

Scale:	Building No:	Checked:	Drawn:
AS NOTED	103	JCC/SNP	CLT

Location: VAMC PERRY POINT, MD 21902

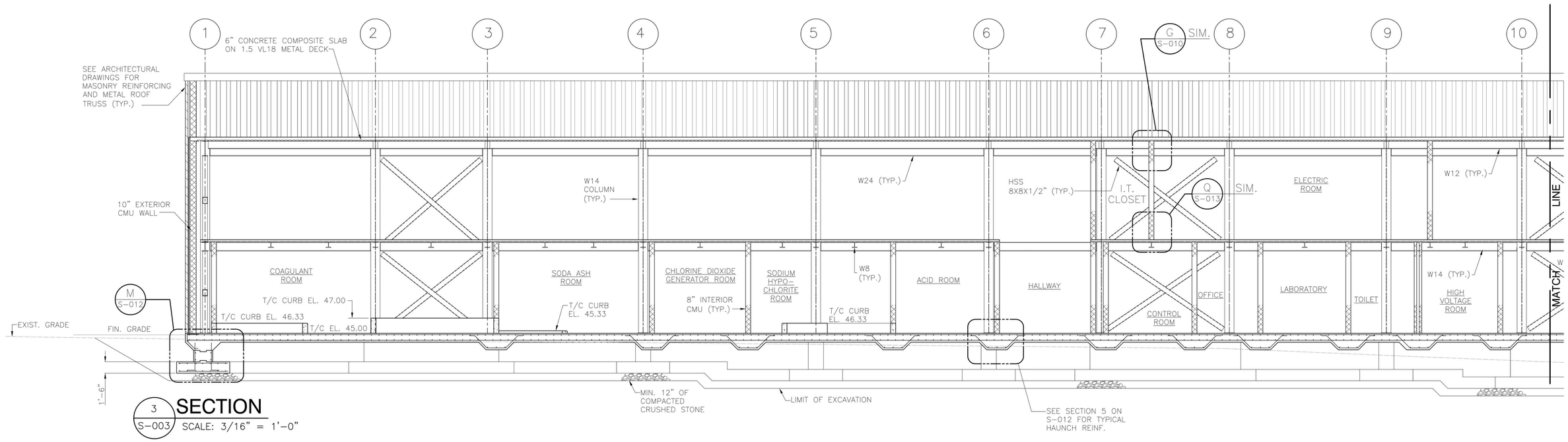
Date: 9/1/2015

Project No: 512A5-13-329

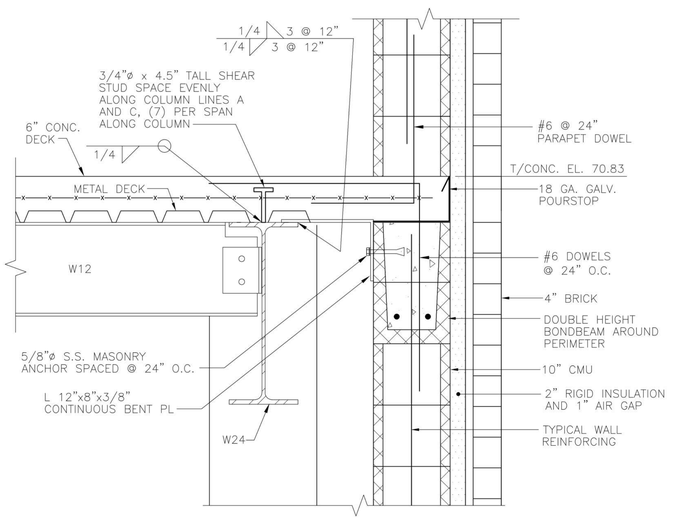
DRAWING NO: S-009

44 OF 124

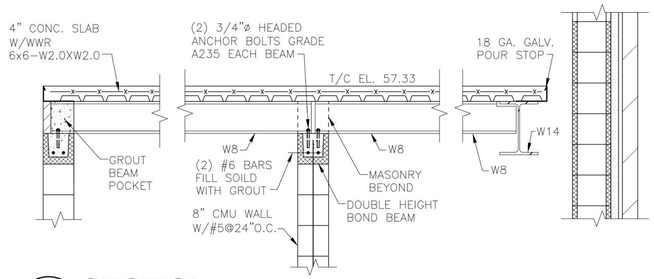
DEPARTMENT OF VETERANS AFFAIRS



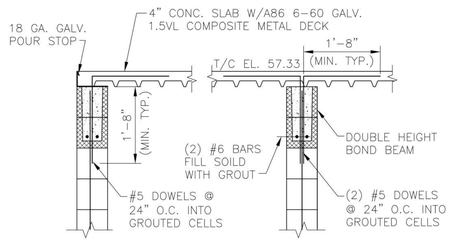
3 S-003 **SECTION**
SCALE: 3/16" = 1'-0"



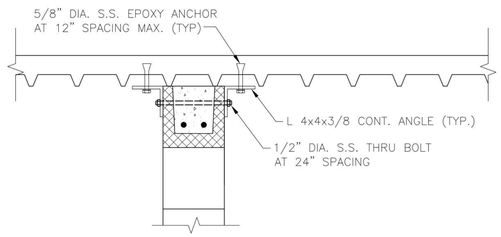
H S-010 **DETAIL**
SCALE: 1 1/2" = 1'-0"



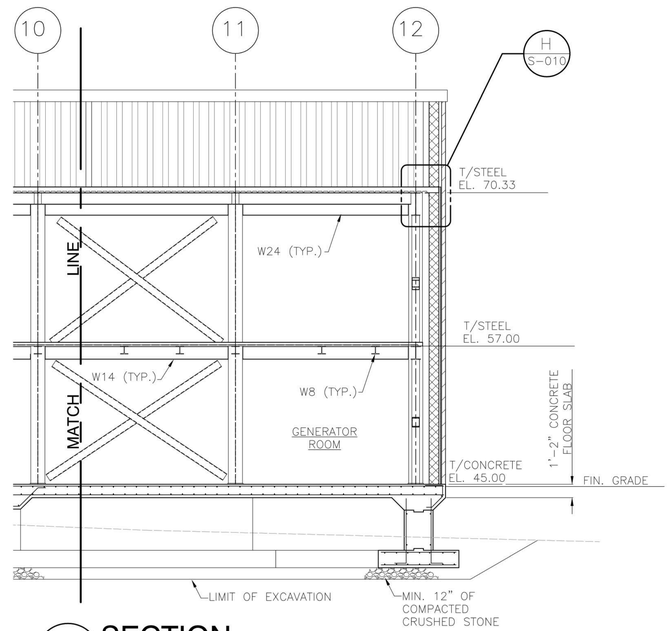
11 S-004 **SECTION**
SCALE: 3/4" = 1'-0"



12 S-004 **SECTION**
SCALE: 3/4" = 1'-0"



G S-009 **TYP. INTERIOR WALL SUPPORT DETAIL**
SCALE: 1 1/2" = 1'-0"



3 S-003 **SECTION**
SCALE: 3/16" = 1'-0"

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 45054, EXPIRATION DATE: 02/09/16

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DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763
631-320-1706
Hatch Mott MacDonald

Approved:	Approved: Chief, Facilities and Engineering:
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Drawing Title: SECTIONS II

Approved: Associate Director for Operations:

Approved: Director, Medical Center:

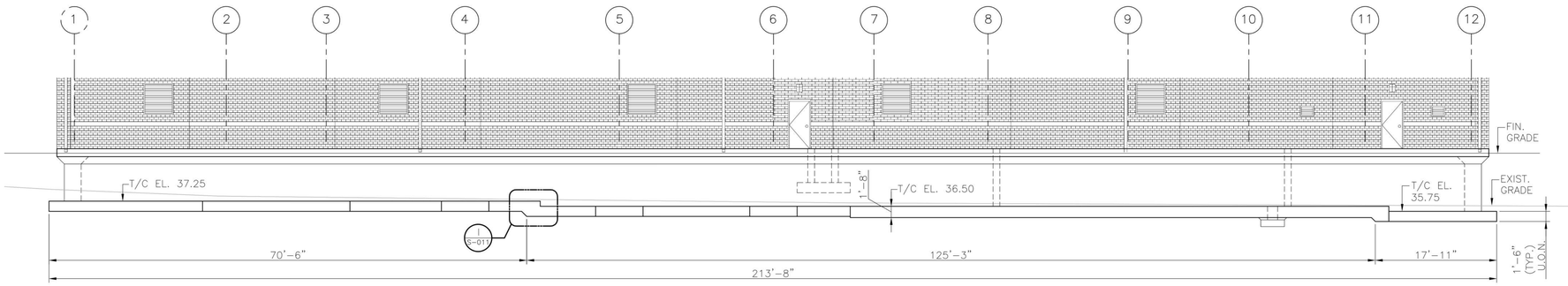
Project Title: POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1
PERRY POINT MD
VAMC

Location: VAMC PERRY POINT, MD 21902

Scale:	Building No:	Checked:	Drawn:
AS NOTED	103	JCC/SNP	CLT

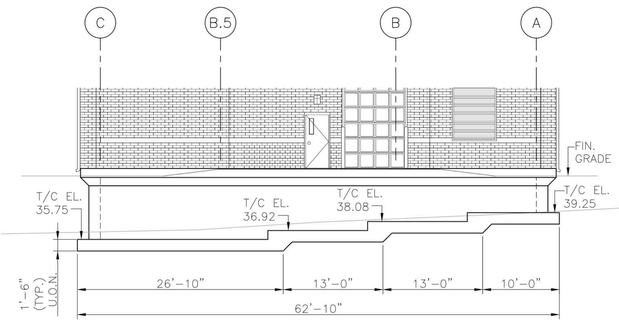
Date: 9/1/2015
Project No: 512A5-13-329
DRAWING NO: S-010
45 OF 124

DEPARTMENT OF VETERANS AFFAIRS



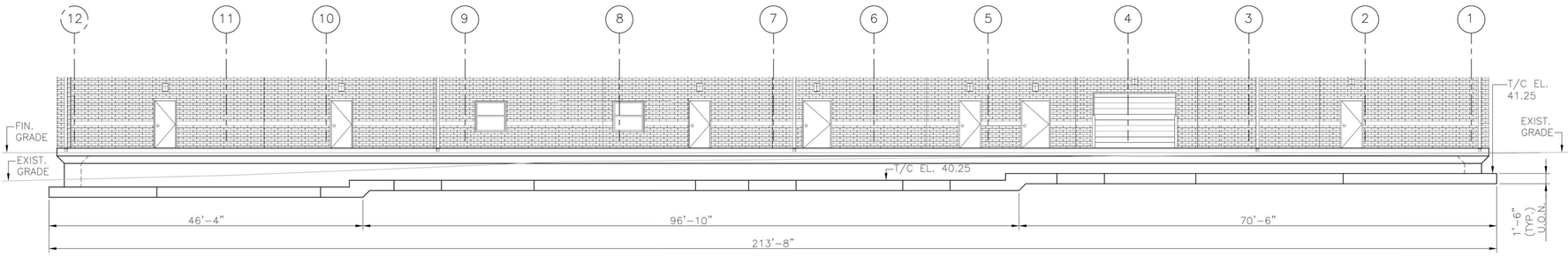
FOUNDATION EL. COLUMN LINE "C"

SCALE: 1/8" = 1'-0"



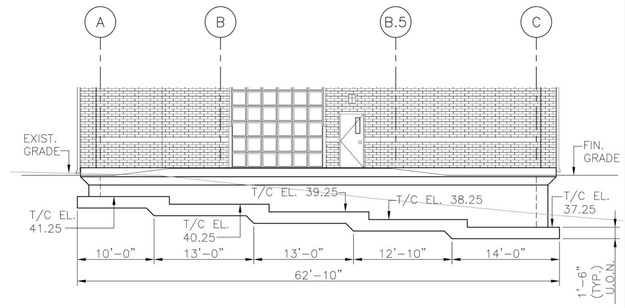
FOUNDATION EL. COL. LINE "12"

SCALE: 1/8" = 1'-0"



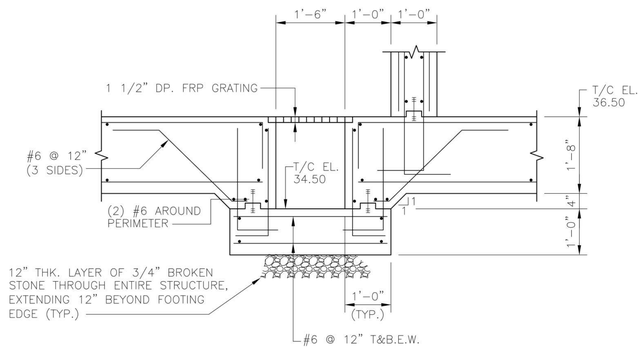
FOUNDATION EL. COLUMN LINE "A"

SCALE: 1/8" = 1'-0"



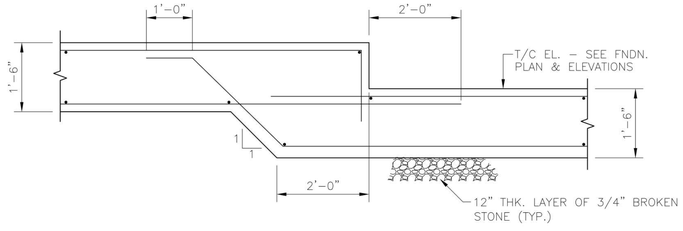
FOUNDATION EL. COL. LINE "1"

SCALE: 1/8" = 1'-0"



7 / S-003 **SECTION**

SCALE: 3/4" = 1'-0"



1 / S-011 **STEP FOOTING DETAIL**

SCALE: 3/4" = 1'-0"

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100% Bid Documents, September 1, 2015

Additions:	Date:
Revisions:	
-	-
-	-
-	-
-	-
-	-
-	-

DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763
631-320-1706
Hatch Mott MacDonald

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 45054, EXPIRATION DATE: 02/09/16

STATE OF MARYLAND — CHRISTOPHER S. CLARK — 45054 — PROFESSIONAL ENGINEER

Approved:	Approved: Chief, Facilities and Engineering:
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Drawing Title: CONCRETE DETAILS I

Approved: Director, Medical Center:

Project Title: POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1
PERRY POINT MD
VAMC

Approved: Associate Director for Operations:

Location: VAMC PERRY POINT, MD 21902

Scale:	Building No:	Checked:	Drawn:
AS NOTED	103	JCC/SNP	CLT

Date: 9/1/2015

Project No: 512A5-13-329

DRAWING NO: S-011

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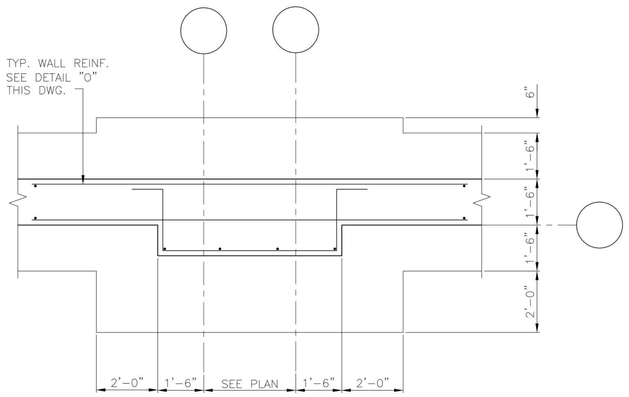
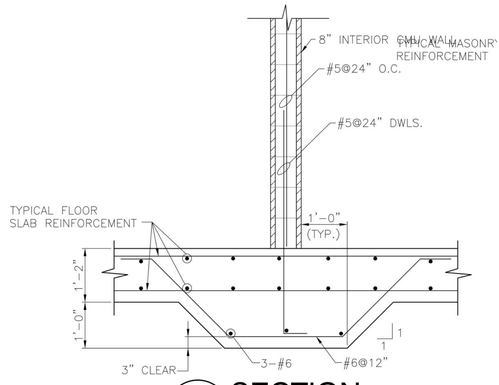
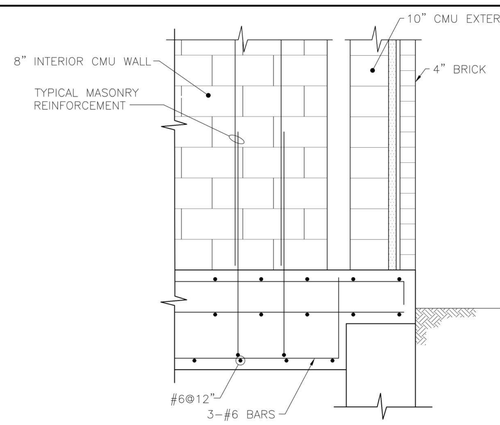
DEPARTMENT OF VETERANS AFFAIRS



J S-003 **TYP. SIDEWALL BRACED COLUMNS PIER DETAIL**
SCALE: 1/2" = 1'-0"



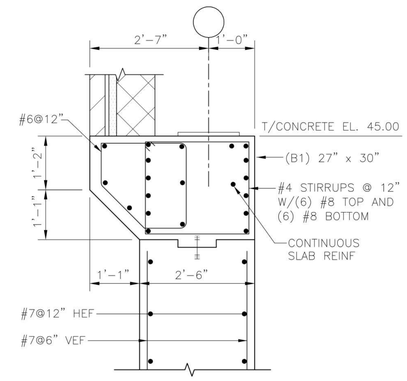
5 S-003 **SECTION**
SCALE: 3/4" = 1'-0"



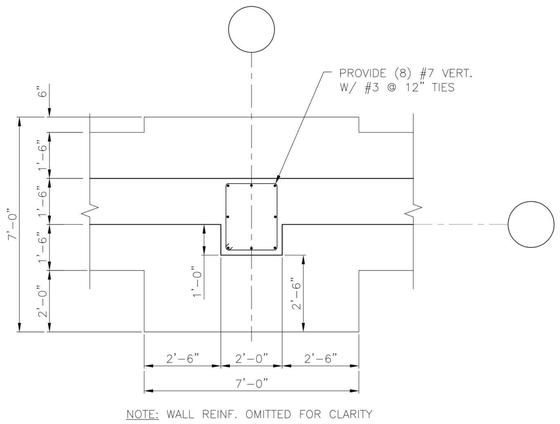
NOTES:

1. PROVIDE (3) #3 TIES AROUND ANCHOR BOLTS WITHIN TOP 5" (TYP. ALL COLUMNS)

8 S-003 **SECTION**
SCALE: 3/4" = 1'-0"

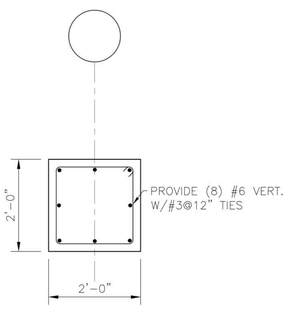


N S-009 **BEAM DETAIL**
SCALE: 3/4" = 1'-0"

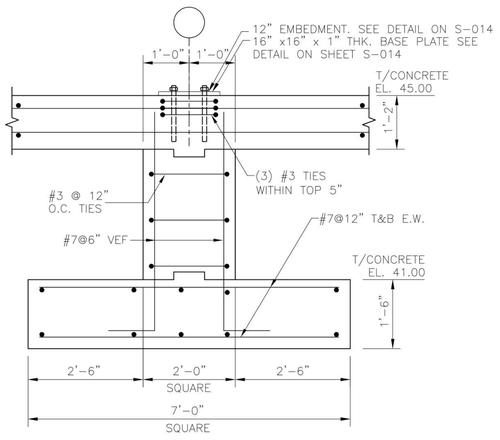


NOTE: WALL REINF. OMITTED FOR CLARITY

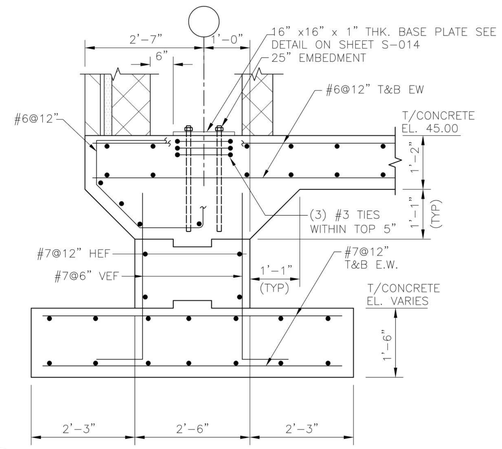
K S-003 **TYP. SIDEWALL UNBRACED COLUMNS PIER DETAIL**
SCALE: 1/2" = 1'-0"



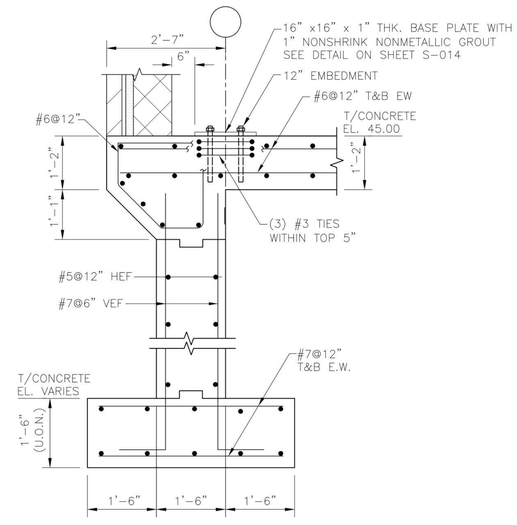
L S-003 **TYP. INTERIOR COLUMN PIER DETAIL**
SCALE: 3/4" = 1'-0"



TYPICAL INTERIOR COLUMN FOOTING DETAIL
SCALE: 3/4" = 1'-0"



M S-010 **TYPICAL ENDWALL FOOTING DETAIL**
SCALE: 3/4" = 1'-0"



0 S-009 **TYPICAL SIDEWALL FOOTING DETAIL**
SCALE: 3/4" = 1'-0"

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100% Bid Documents, September 1, 2015

Additions:	Date:
Revisions:	
-	-
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-	-
-	-
-	-
-	-

DCS *Infrastructure, LLC*
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763 631-320-1706
Hatch Mott MacDonald

Approved:	*Approved: Chief, Facilities and Engineering:*
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Approved: Associate Director for Operations:

Approved: Director, Medical Center:

Drawing Title: CONCRETE DETAILS II

Project Title: POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1
PERRY POINT MD
VAMC

Date: 9/1/2015

Project No: 512A5-13-329

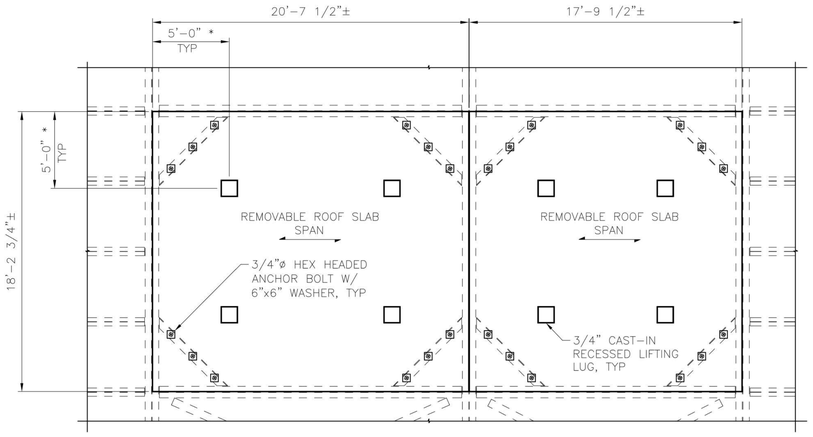
Scale:	Building No:	Checked:	Drawn:
AS NOTED	103	JCC/SNP	CLT

DRAWING NO: S-012

Location: VAMC PERRY POINT, MD 21902

47 OF 124

DEPARTMENT OF VETERANS AFFAIRS



Q / S-013 **REMOVABLE SLAB PLAN**

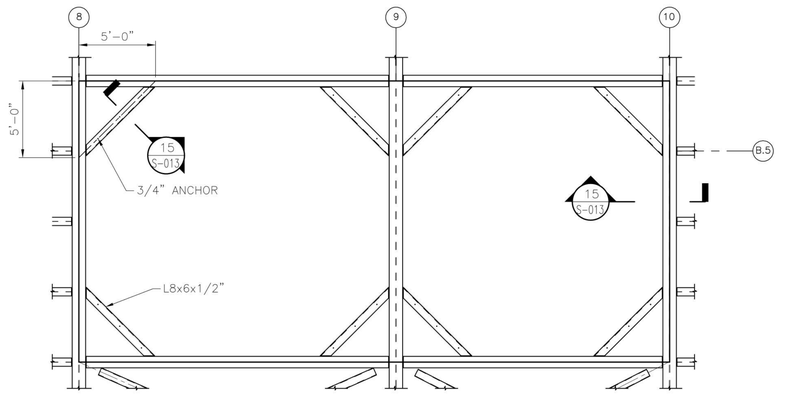
SCALE: 1/4" = 1'-0"

NOTE:

NOTES:

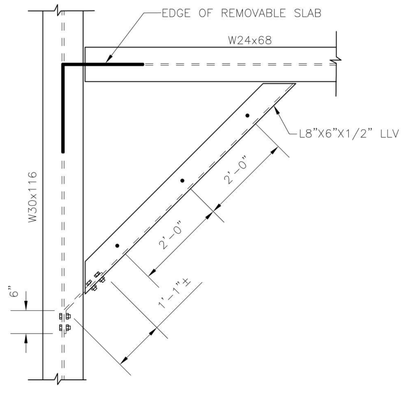
* ADJUST AS REQUIRED TO AVOID CONFLICTS WITH ROOF TRUSSES. ANY ADJUSTMENTS SHALL BE FULLY SYMMETRICAL TO ENSURE STABILITY. LIFTING BOLTS TO BE LOCATED A MINIMUM OF SIX INCHES AWAY (CLEAR) OF ANY OPENING.

ACTUAL DIMENSIONS OF PRECAST PLANKS SHALL BE DETERMINED IN THE FIELD.



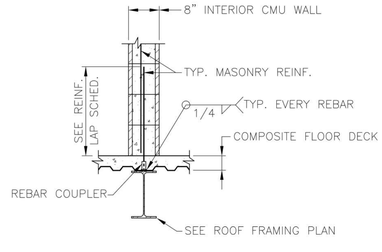
P / S-005 **FRAMING PLAN AT REMOVABLE SLAB**

SCALE: 1/4" = 1'-0"



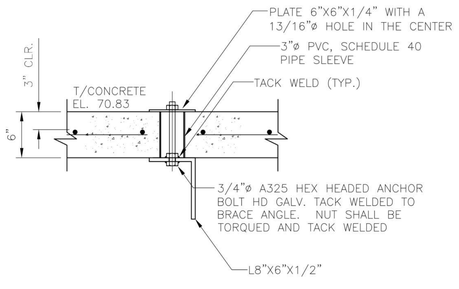
C / S-005 **DETAIL**

SCALE: 3/4" = 1'-0"



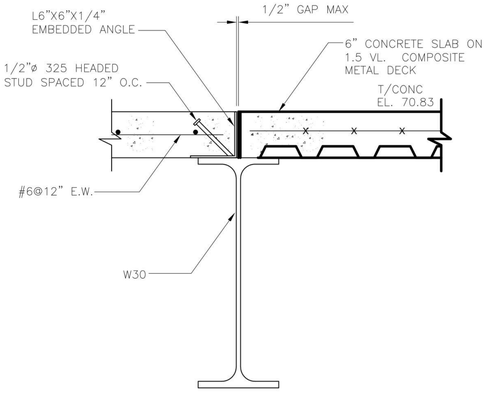
Q / S-009 **DETAIL**

SCALE: 3/4" = 1'-0"



13 / S-013 **SECTION**

SCALE: 1 1/2" = 1'-0"



15 / S-013 **SECTION**

SCALE: 1 1/2" = 1'-0"

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PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 45054, EXPIRATION DATE: 02/09/16

Additions:	Date:
Revisions:	
-	-
-	-
-	-
-	-
-	-
-	-

DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763 631-320-1706
Hatch Mott MacDonald

STATE OF MARYLAND — MARK C. CAPLAN — 45054 — PROFESSIONAL ENGINEER

Approved:	Approved: Chief, Facilities and Engineering:
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Drawing Title: CONCRETE DETAILS III

Approved: Associate Director for Operations:

Approved: Director, Medical Center:

Project Title: POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1
PERRY POINT MD
VAMC

Scale:	Building No:	Checked:	Drawn:
AS NOTED	103	JCC/SNP	CLT

Location: VAMC PERRY POINT, MD 21902

Date: 9/1/2015

Project No: 512A5-13-329

DRAWING NO: S-013

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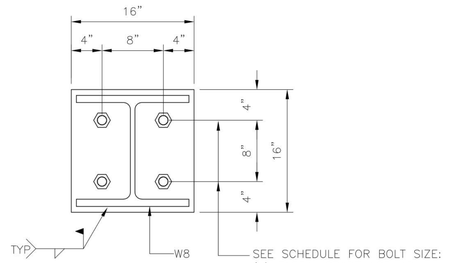
DEPARTMENT OF VETERANS AFFAIRS

ANCHOR BOLT SCHEDULE		
COLUMN	BOLT SIZE	EMBEDMENT "D" DEPTH
1A, 1B, 1B.5, 1C, 12A, 12B, 12B.5, 12C	1 1/4" DIAMETER	25" LONG
ALL OTHER COLUMNS	1" DIAMETER	12" LONG

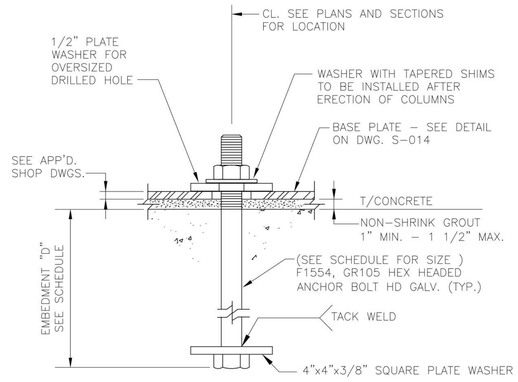


SEE SCHEDULE FOR BOLT SIZE: (4) F1554, GRADE 105 HD GALVANIZED ANCHOR BOLTS – SEE "STRUCTURAL STEEL ANCHOR BOLT DETAIL" THIS SHEET

R / S-003 BASE PLATE DETAIL

SCALE: 1 1/2" = 1'-0"

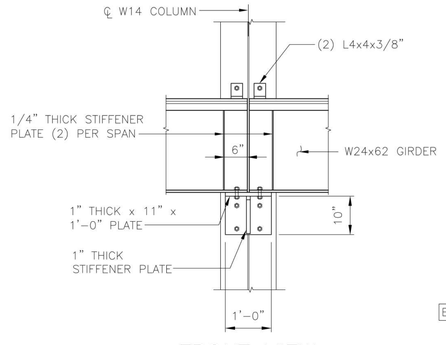
NOTE:
1" NONSHRINK NON METALLIC GROUT UNDER ALL COLUMN BASE PLATES



CAST-IN-ANCHORS TO BE USED GENERALLY THROUGHOUT FOR ANCHORING STRUCTURAL STEEL NOT SUBJECT TO VIBRATION, AND WHERE LOCATION TOLERANCES ARE NOT REQUIRED.

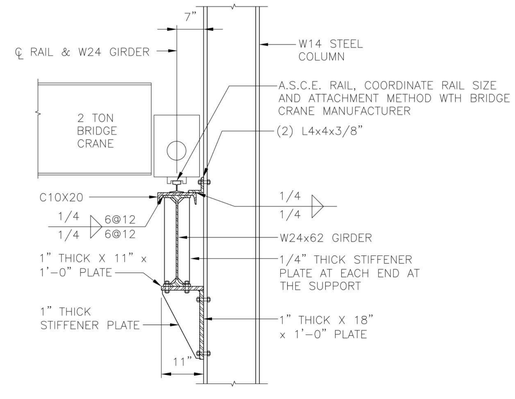
STRUCTURAL STEEL ANCHOR BOLT DETAIL

NOT TO SCALE



FRONT VIEW

BID-DEDUCT #1



SIDE VIEW

S / S-009 DETAIL

SCALE: 3/4" = 1'-0"

PROFESSIONAL CERTIFICATION
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DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763 631-320-1706
Hatch Mott MacDonald

STATE OF MARYLAND – JOSEPH C. CANNON – 45054 – PROFESSIONAL ENGINEER

Approved:	Approved: Chief, Facilities and Engineering:
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Drawing Title: STEEL DETAILS I

Approved: Associate Director for Operations:

Approved: Director, Medical Center:

Project Title: POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1
PERRY POINT MD
VAMC

Location: VAMC PERRY POINT, MD 21902

Scale:	Building No:	Checked:	Drawn:
AS NOTED	103	JCC/SNP	CLT

Date: 9/1/2015

Project No: 512A5-13-329

DRAWING NO: S-014

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DEPARTMENT OF VETERANS AFFAIRS

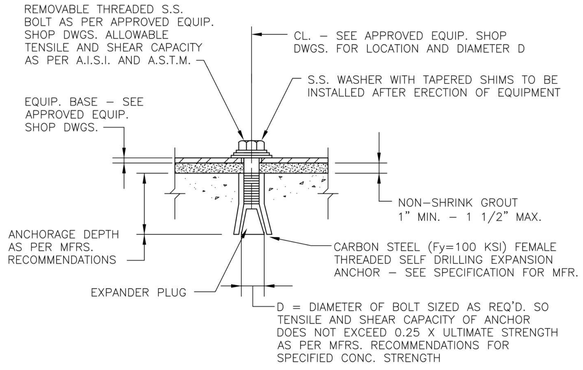
TENSION LAP SPLICE & DEVELOPMENT (ℓd) BAR LENGTHS – WALLS & SLABS											
BAR SIZE		CONCRETE COVER TO BAR									
INCH POUND	SOFT METRIC	0.75 IN.		1.00 IN.		1.50 IN.		2.0 IN.		3.0 IN.	
		TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER
#3	#10	16	16	16	16	16	16	16	16	16	16
#4	#13	24	19	20	16	20	16	20	16	20	16
#5	#16	36	28	29	22	24	19	24	19	24	19
#6	#19	48	37	40	31	29	22	29	22	29	22
#7	#22	78	60	64	50	48	37	42	33	33	23
#8	#25	96	74	80	62	60	47	48	37	42	29
#9	#29	117	90	98	76	74	57	60	46	42	32
#10	#32	140	108	119	92	91	79	74	57	47	36
#11	#36	166	127	141	108	109	84	89	68	51	40

NOTES:
1. CONCRETE TO BE NORMAL WEIGHT CONCRETE WITH A 28 DAY ULTIMATE COMPRESSIVE STRENGTH FC'=4,500 PSI.
2. REINFORCING TO BE UNCOATED BARS CONFORMING TO ASTM A615, GRADE 60.
3. LENGTHS SHOWN IN TABLE HAVE BEEN CALCULATED AS PER SECTIONS 12.2.3 AND 12.15 OF THE ACI CODE.
4. LENGTHS SHOWN ARE TYPE "B" CLASS LAPS. WHERE LESS THAN 1/2 OF THE REINFORCING IS LAPPED AT ANY ONE LAP LOCATION, 0.77 OF THE LENGTHS GIVEN IN THE TABLE MAY BE USED (TYPE A CLASS LAPS).
5. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BAR.
6. LENGTHS SHOWN IN TABLE ARE BASED UPON A MINIMUM CENTER–TO–CENTER BAR SPACING OF TWICE THE CONCRETE COVER PLUS ONE BAR DIAMETER.
7. CLEAR COVER TO REINFORCING TO BE NOT LESS THAN THE NOMINAL BAR DIAMETER.

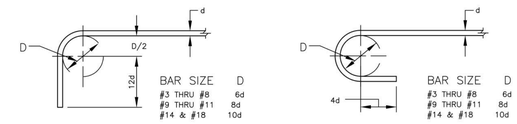
COMPRESSION LAP SPLICE & DOWEL EMBEDMENT			
BAR SIZE		DOWEL EMBEDMENT	COMPRESSION LAP
INCH POUND	SOFT METRIC		
#3	#10	8	12
#4	#13	10	15
#5	#16	12	19
#6	#19	15	23
#7	#22	17	27
#8	#25	19	30
#9	#29	22	34
#10	#32	24	38
#11	#36	27	42

NOTES:
1. CONCRETE TO HAVE A MINIMUM 28 DAY ULTIMATE COMPRESSIVE STRENGTH FC'=4,500 PSI.
2. REINFORCING TO CONFORM TO ASTM A615–GRADE 60.

REINF. LAP SPLICE, DEVELOPMENT PLUS EMBEDMENT SCHEDULES
(Fy = 60,000 PSI)



TYPICAL DETAIL FOR EXPANSION ANCHOR BOLTS

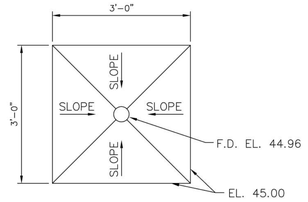


TYPICAL BAR HOOK DETAILS

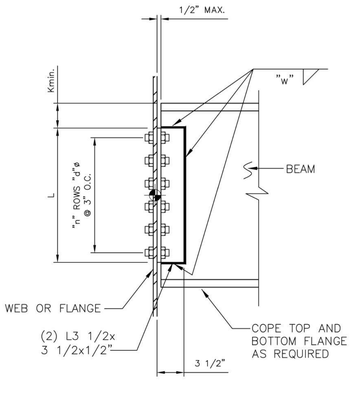
SLAB THICK.	REINFORCING	SLAB THICK.	REINFORCING	SLAB THICK.	REINFORCING
3"	#3@ 15"	6"	#4@ 18"	9"	#4@ 12"
3 1/2"	#3@ 15"	6 1/2"	#4@ 17"	9 1/2"	#5@ 18"
4"	#3@ 15"	7"	#4@ 15"	10"	#5@ 17"
4 1/2"	#3@ 14"	7 1/2"	#4@ 14"	11"	#5@ 15"
5"	#3@ 12"	8"	#4@ 13"	12"	#5@ 14"
5 1/2"	#4@ 18"	8 1/2"	#4@ 12"		

NOTES:
1. WHERE NO SLAB REINFORCING IS INDICATED ON PLAN, NOTES OR SECTION PROVIDE TOP AND BOTTOM REINF. AS PER SCHEDULE ABOVE.
2. PROVIDE TEMPERATURE REINFORCING PERPENDICULAR TO BOTTOM MAIN REINFORCEMENT IN ALL ONE–WAY SLABS (INNER LAYER) AS PER SCHEDULE ABOVE.
3. REINFORCING Fy= 60,000 PSI.

SLAB TEMP. REINF. PLUS MINIUM SLAB REINF. SCHEDULE

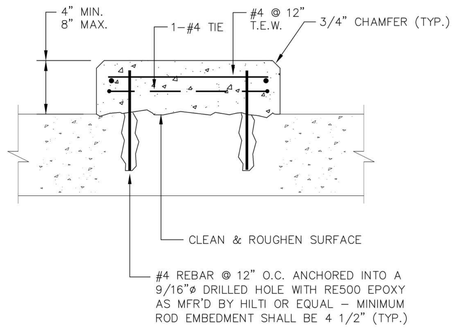


DEPRESSED SLAB AT FLOOR DRAIN DETAIL

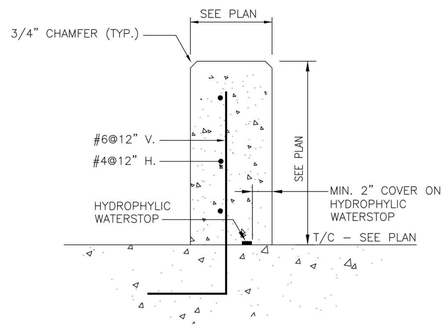


THE MINIMUM CLEAR COVER FOR REINF. BARS SHALL BE ONE BAR DIAMETER OR THE VALUES TABULATED BELOW, WHICHEVER IS THE GREATER.	
SLABS (EXTERIOR)	2"
SLABS EXPOSED TO LIQUIDS	2"
GIRDERS & BEAMS (EXTERIOR)	2"
SLABS (INTERIOR)	3/4"
GIRDERS & BMS. (TO STIRRUPS) INTERIOR	1 1/2"
TIED COLUMNS & PIERS (TO TIES)	
SURF. EXPOSED TO EARTH & WEATHER	2"
OTHER SURFACES	1 1/2"
FOUNDATION ELEMENTS	
FORMED SURFACES	2"
SURF. PLACED AGAINST EARTH	3"
WALLS	
SURFACES EXPOSED TO EARTH & LIQUID	2"
SURFACES EXPOSED TO WEATHER	2"
OTHER SURFACES	1"

TYPICAL CONCRETE COVER FOR REINF. BARS
UNLESS NOTED OTHERWISE ON PLAN, SECTION OR DETAIL



HOUSEKEEPING PAD DETAIL
ON EXISTING CONCRETE



CONCRETE CONTAINMENT CURB DETAIL

BEAM CONNECTION SCHEDULE						
BEAM	L (LENGTH)	"d" (INCHES)	"n" (QUANTITY)	"w" (INCHES)	CONNECTION TYPE	Lev
W8	5 1/2"	3/4	2	1/4	A	
W12	8 1/2"	3/4	3	–	B	2"
W14	8 1/2"	3/4	3	3/16	A	
W24	1'–5 1/2"	7/8	6	1/4	A	
W30	1'–5 1/2"	7/8	6	1/4	A	

NOTES: ALL BOLTED CONNECTIONS TO BE A325 TYPE N
Leh = 1 3/4" (TYPICAL)
Lev = 1 1/4" (TYPICAL UNLESS OTHERWISE NOTED)

STEEL CONNECTION DETAILS

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 45054, EXPIRATION DATE: 02/09/16

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Additions:	Date:
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DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763
631-320-1706
Hatch Mott MacDonald

STATE OF MARYLAND JOHN C. CASEY 45054 PROFESSIONAL ENGINEER

Approved:	Approved: Chief, Facilities and Engineering:
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Drawing Title: TYPICAL DETAILS I

Approved: Associate Director for Operations:

Approved: Director, Medical Center:

Project Title: POTABLE WATER SYSTEM IMPROVEMENTS – TIER 1
PERRY POINT MD
VAMC

Scale: NONE | Building No: 103 | Checked: JCC/SNP | Drawn: CLT

Location: VAMC PERRY POINT, MD 21902

Date: 9/1/2015

Project No: 512A5-13-329

DRAWING NO: S-015

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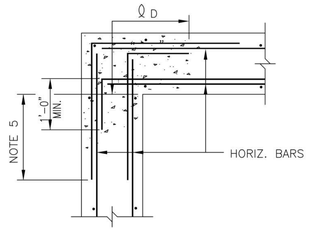
DEPARTMENT OF VETERANS AFFAIRS

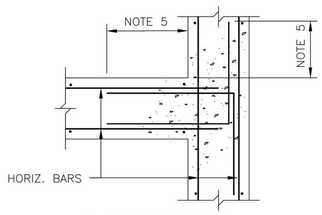
MIN. WALL REINFORCING SCHEDULE		
WALL THICK.	REINFORCING UNLESS NOTED	REMARKS
8",9"	2#6 T&B CONT. #5@ 10" H #5@ 10" V	CENTER OF WALL
10",11",12"	2#7 T&B CONT. #4@ 10"H #4@ 10" V	EACH FACE
13",14"	2#7 T&B CONT. #4@ 8" H #4@ 8" V	EACH FACE
15",16"	2#8 T&B CONT. #5@ 12" H #5@ 12"V	EACH FACE
17",18"	3#7 T&B CONT. #5@ 8" H #5@ 8" V	EACH FACE

(Fy=60,000 PSI)



AT CORNERS

NOTE:
ALL CORNER BARS TO BE SAME SIZE & SPACING AS HORIZ. REINF. UNLESS OTHERWISE NOTED.



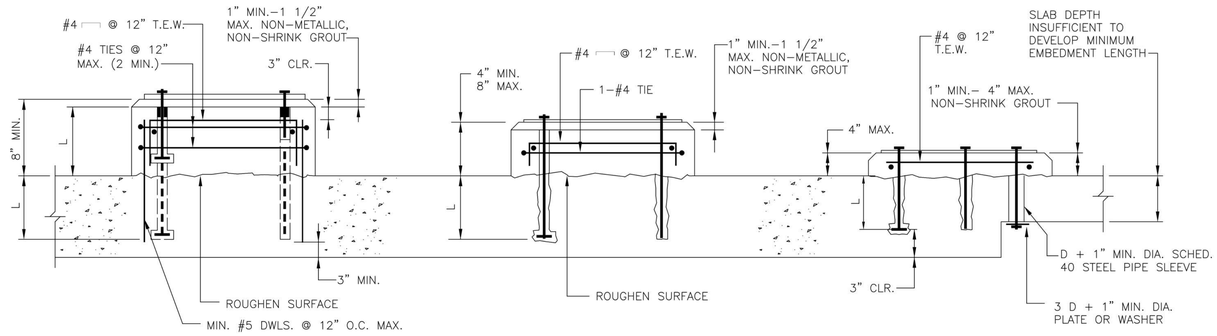
AT INTERSECTIONS

(ONE LAYER, ALTERNATE DEVELOPMENT DIRECTION)

NOTES:

1. PROVIDE WALL REINF. AS PER SCHEDULE WHERE NO OTHER REINF. IS CALLED FOR ON PLAN OR SECTIONS.
2. ALL HORIZONTAL BARS SHALL BE LAPPED AS PER DETAIL.
3. ALL CONT. BOTTOM GRADE BM. BARS TO BE SPLICED NEAR SUPPORTS (THAT IS WITHIN 1/5 OF SPAN LENGTH).
4. ALL CONT. TOP GRADE BM. BARS SHALL BE SPLICED BETWEEN SUPPORTS (WITHIN 1/5 OF SPAN FROM CL. OF MID-SPAN).
5. PROVIDE TENSION LAP SPLICE AT ALL SPLICES UNLESS NOTED. 0.77 OF SPLICE LENGTH MAY BE USED WHERE LESS THAN 1/2 THE BARS IN ANY FACE ARE SPLICED AT ONE PLACE. SEE (DEVELOPMENT SCHEDULE DETAIL)
6. VERT. BARS SHALL START FROM TOP OF FTG. HORIZ. BARS SHALL START A DISTANCE OF 1/2 THE NORMAL BAR SPACING FROM THE TOP OF FTG. & TOP OF FRAMED SLABS & STOP A MAX. OF 3" FROM TOP OF WALL & BOTTOM OF FRAMED SLAB.
7. GRADE BMS. TO BE REINFORCED WITH SAME REINF. AS WALLS OF LIKE THICKNESS EXCEPT WHERE NOTED OTHERWISE ON PLAN OR SECTION (WHERE BM. DEPTH IS 3'-0" OR LESS VERT. REINF. TO BE STIRRUPS).
8. FOR INTERMEDIATE WALL THICKNESS USE REINFORCEMENT OF NEXT THICKER WALL
9. FOR TYP. REINF. AROUND WALL OPENINGS SEE DETAIL ALL HORIZ. REINF. SPLICES IN NON-PRESTRESSED CIRCULAR TANKS SHALL BE TENSION LAPS AND SHALL BE STAGGERED A MIN. OF 4'-0" FROM SPLICES IN THE OPPOSITE WALL FACE.
10. WALL CONSTRUCTION JOINTS TO BE 30'-0" MAX. ON CENTER, WITH JOINT 15'-0" MAX. FROM ALL EXTERIOR CORNERS.

TYPICAL FOUNDATION WALL PLUS GRADE BEAM REINF. SCHEDULE PLUS LAP DETAILS



BASE 8" OR GREATER IN HEIGHT

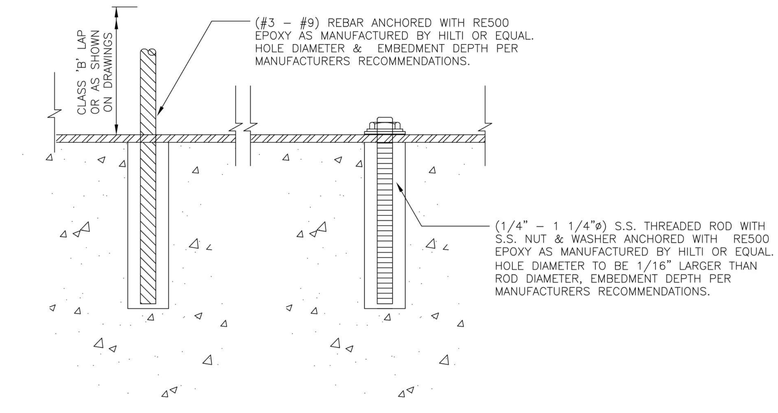
BASES LESS THAN 8" IN HEIGHT

BASE 4" OR LESS IN HEIGHT

NOTES:
THE EMBEDMENT LENGTHS OF ANCHOR BOLTS SHALL BE DEVELOPED ENTIRELY WITHIN THE CONCRETE BASE WHEREVER POSSIBLE. PROVIDE SUFFICIENT #5 MIN. SIZE DOWELS TO DEVELOP NOT LESS THAN TWICE THE FULL DESIGN TENSION OF THE ANCHOR BOLTS IN THE BASE, OR AT LEAST EQUAL TO THE DESIGN TENSION OF THE ANCHOR BOLTS, IF EMBEDDED IN THE SLAB FOR BASES 8" OR GREATER IN HEIGHT. WHERE THE HEIGHT OF THE CONCRETE BASE CANNOT DEVELOP THE MIN. EMBEDMENT LENGTHS, THE BOLTS SHALL BE EMBEDDED AND DEVELOPED WITHIN THE SUPPORTING STRUCTURAL CONCRETE SLAB BELOW THESE BOLTS WILL BE EXTENDED THROUGH THE BASE TO ANCHOR THE EQUIPMENT ABOVE. IF BOTH CONCRETE BASE AND SLAB ARE OF INSUFFICIENT DEPTH TO DEVELOP THE MIN. EMBEDMENT LENGTH, PROVIDE A SCHED. 40 STEEL PIPE SLEEVE AT LEAST ONE INCH LARGER IN DIAMETER THAN THE BOLT DIAMETER AND ANCHOR BY BEARING AGAINST THE BOTTOM OF THE SLAB WITH A PLATE OR WASHER AS SHOWN ABOVE, SUBJECT TO APPROVAL BY THE ENGINEER.

GENERAL NOTES:
QUANTITY, SIZE AND LOCATION OF ANCHOR BOLTS AS PER APPROVED EQUIPMENT SHOP DWGS. L = MIN. EMBEDMENT LENGTH AS PER APPROVED EQUIP. SHOP DWGS. AND TYPICAL DETAILS FOR ANCHOR BOLTS.

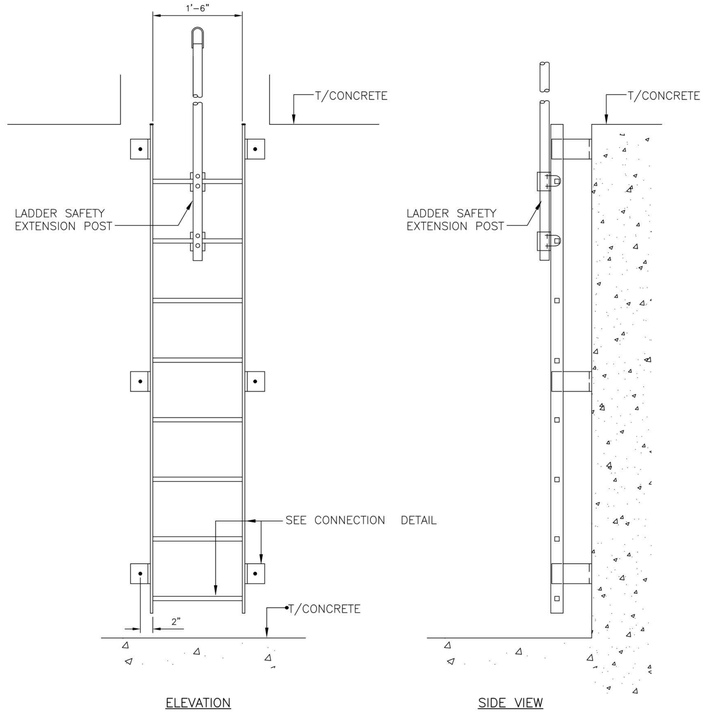
EQUIPMENT BASES ON ALL CONCRETE SLAB CONSTRUCTION



ADHESIVE ANCHORING SYSTEMS

1. EPOXY ADHESIVE TO BE RE500 MANUFACTURED BY HILTI OR APPROVED EQUAL.
2. DIAMETER OF HOLE SHALL BE AS RECOMMENDED BY MANUFACTURER FOR THE PARTICULAR PRODUCT SPECIFIED IN THE DRAWINGS.
3. ALL ANCHORED THREADED RODS AND REBARS SHALL BE TESTED AFTER INSTALLATION AT CONTRACTORS EXPENSE. A MINIMUM OF 10% OF EACH DAYS APPLICATIONS AND NO LESS THAN 2 SHALL BE TESTED BY APPLYING A TENSION LOAD 2 TIMES THE MANUFACTURERS ALLOWABLE LOAD TO THE EMBEDDED ANCHOR. IF A TEST APPLICATION FAILS, ALL APPLICATIONS FOR THAT DAY SHALL BE TESTED. TESTING PROCEDURES AND RESULTS SHALL BE SUBMITTED AND APPROVED BY THE ENGINEER.

TYPICAL DETAIL FOR STUD OR REBAR ANCHORED IN CONCRETE WITH RE500 EPOXY BY HILTI



ELEVATION

SIDE VIEW

ALUMINUM LADDER-UP DETAILS

USE ON ALL LADDERS BELOW GRADE (20'-0" HIGH MAX.) (20'-30' USE CAGE) (LANDINGS AT EVERY 20')

Fully Sprinklered

100% Bid Documents, September 1, 2015

Additions:	Date:
Revisions:	
-	-
-	-
-	-
-	-
-	-
-	-

DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763
631-320-1706
Hatch Mott MacDonald

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STATE OF MARYLAND — STEVEN C. CACCHIO — 45054 — REGISTERED PROFESSIONAL ENGINEER

Approved:	Approved: Chief, Facilities and Engineering:
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Approved: Director, Medical Center:

Approved: Associate Director for Operations:

Drawing Title: TYPICAL DETAILS II

Project Title: POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1
PERRY POINT MD
VAMC

Location: VAMC PERRY POINT, MD 21902

Scale:	Building No:	Checked:	Drawn:
NONE	103	JCC/SNP	CLT

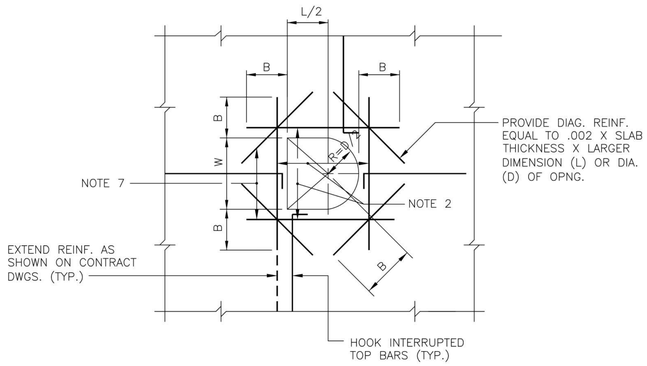
Date: 9/1/2015

Project No: 512A5-13-329

DRAWING NO: S-016

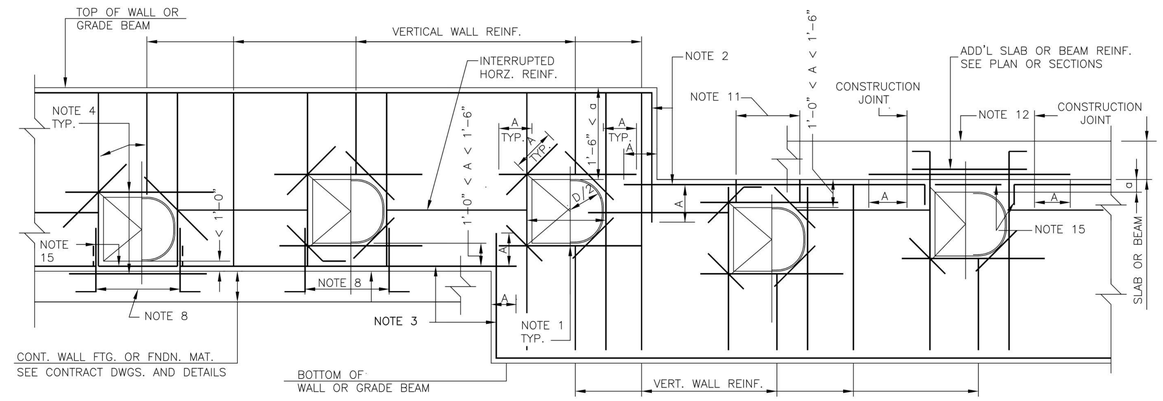
51 OF 124

DEPARTMENT OF VETERANS AFFAIRS



NOTES: (UNLESS NOTED OTHERWISE ON PLANS)
1. STOP BOTTOM SLAB REINF. AT OPENING.
2. PROVIDE REINF. EACH SIDE OF OPENING (T & B) EQUAL TO AREA OF REINF. STOPPED AT OPENING (UNLESS NOTED OTHERWISE).
3. PROVIDE LAP SPLICE TYPE "B" WHERE NOTED "B" ON ABOVE DETAIL.
4. OPENINGS NOT SHOWN ON THE CONTRACT DWGS. TO BE REVIEWED BY THE ENGINEER BEFORE PLACING.
5. D = DIAMETER OF OPENING
   W = WIDTH OF OPENING
   L = LENGTH OF OPENING
   — SEE PLAN
6. OPENINGS SHALL BE A MIN. OF 1'–0" FROM THE FACE OF COLUMN OR WALL UNLESS NOTED OTHERWISE.
7. PROVIDE DIAGONAL REINF. IN MIDDLE OF SLAB WHERE SHOWN ON CONTRACT DWGS. REINF. TO BE 4'–0" LONG FOR #4 BARS, 5'–0" LONG FOR #5 BARS AND 6'–0" LONG FOR #6 BARS.

TYPICAL DETAIL OF ADD'L. REINF. AT 1'-0" OR LARGER OPENINGS IN SOLID SLABS

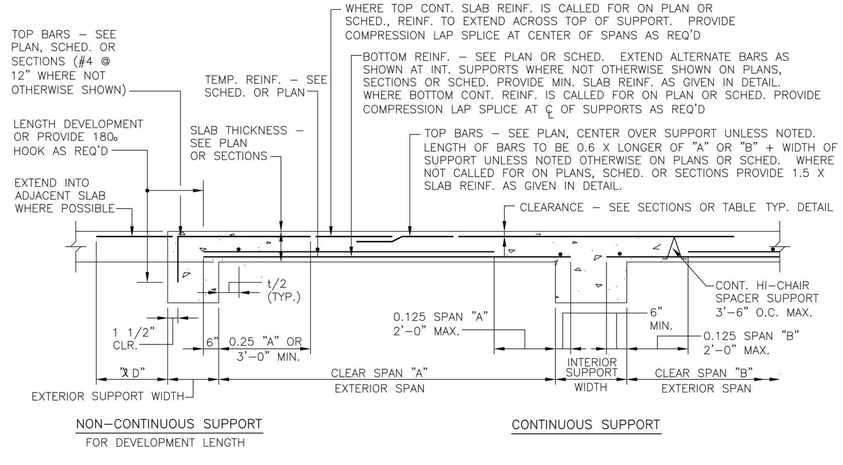


LESS THAN 1'–0" ABOVE BOTTOM OF WALL | 1'–0" TO 1'–6" ABOVE BOTTOM OF WALL | STEP IN BOTTOM OF WALL | MORE THAN 1'–6" TO TOP OR BOTTOM | STEP IN TOP OF WALL | 1'–0" TO 1'–6" BELOW TOP OF WALL | LESS THAN 1'–6" BELOW TOP OF WALL

NOTES

1. ADDITIONAL REINF. TO BE PROVIDED FOR ALL OPENINGS 1'–0" OR GREATER (DIAMETER OR SIZE).
2. CONT. TOP HORIZ. REINF. (IN GRADE BEAMS SPLICE MIDWAY BETWEEN SUPPORTS).
3. CONT. BOTTOM HORIZ. REINF. (IN GRADE BEAMS SPLICE AT SUPPORTS).
4. PROVIDE ADDITIONAL REINF. AS SHOWN. AREA OF REINF. TO BE TWO TIMES AREA OF INTERRUPTED REINF. (PLACE HALF EACH SIDE OF OPENING).
5. ALL SPLICES TO BE TENSION SPLICES UNLESS NOTED OTHERWISE.
6. DIMENSION "A" = DEVELOPMENT LENGTH SEE TYPICAL DETAIL.
7. DIMENSION "D" = OUTSIDE DIMENSION OF PIPE OR SLEEVE CAST IN WALL OR GRADE BEAM.
8. PROVIDE ADDITIONAL DOWELS AS SHOWN. AREA OF DOWELS TO BE TWO TIMES AREA OF INTERRUPTED DOWELS (PLACE HALF EACH SIDE OF OPENING).
9. PROVIDE DIAGONAL REINF. AT OPENINGS EQUAL TO 0.002 X WALL THICKNESS (T) X LARGER DIMENSION OR DIAMETER (D) OF OPENING. REINF. TO BE PLACED IN MIDDLE OF WALLS OR GRADE BEAMS 12 IN. OR LESS IN THICKNESS OR HALF ON EACH FACE FOR THICKER MEMBERS. (MINIMUM REINF. = 2–#5). (T & D IN INCHES)
10. WHERE OPENINGS ARE 2'–0" OR LESS APART, PROVIDE #3 TIES AT 12" O.C. IN WALL BETWEEN OPENINGS.
11. PROVIDE #3 STIRRUPS SPACED AT HALF THE DEPTH OF CONCRETE OVER THE OPENING.
12. WHERE TOP OF OPENING IS LESS THAN 1'–0" FROM TOP OF WALL OR GRADE BEAM, CONCRETE ABOVE OPENING TO BE PLACED WITH FLOOR SYSYTEM.
13. GRADE BEAM REINF. DETAILS TO BE THE SAME UNLESS NOTED OTHERWISE.
14. PROVIDE ADDITIONAL REINF. AT ALL DEPRESSIONS AND RECESSES IN TOP OF WALLS. REINF. TO BE DETAILED AS PER NOTE 6.
15. IF a IS 5" OR GREATER, RUN HORIZONTAL REINF. THROUGH. IF a IS LESS THAN 5"; HOOK HORIZONTAL REINF. 12" MIN.

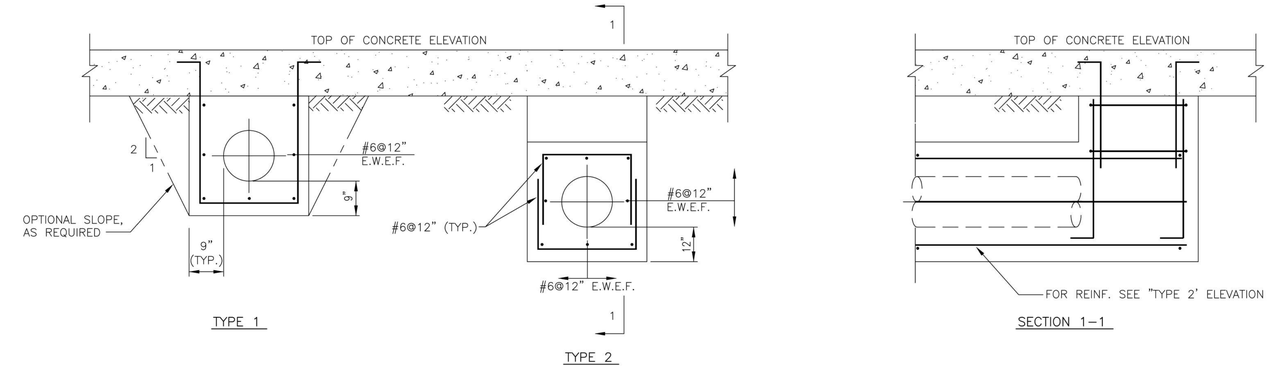
TYPICAL DETAILS OF ADD'L REINF. AT OPENINGS AND STEPS IN TOP OR BOTTOM OF CONCRETE WALLS



NON–CONTINUOUS SUPPORT FOR DEVELOPMENT LENGTH

CONTINUOUS SUPPORT

TYPICAL ONE-WAY SLAB DETAILS



TYPE 1

TYPE 2

SECTION 1–1

NOTE: ALL PIPING AND CONDUITS BELOW STRUCTURES TO BE ENCASED, UNLESS OTHERWISE NOTED.

TYPICAL CONCRETE PIPE ENCASEMENT DETAIL

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Fully Sprinklered

100% Bid Documents, September 1, 2015

Additions:	Date:
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STATE OF MARYLAND — MARTIN C. CALLAHAN — 45054 — PROFESSIONAL ENGINEER

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	Approved: Infection Control Officer

Approved: Associate Director for Operations:

Approved: Director, Medical Center:

Drawing Title: TYPICAL DETAILS III

Project Title: POTABLE WATER SYSTEM IMPROVEMENTS – TIER 1
PERRY POINT MD
VAMC

Location: VAMC PERRY POINT, MD 21902

Scale:	Building No:	Checked:	Drawn:
NONE	103	JCC/SNP	CLT

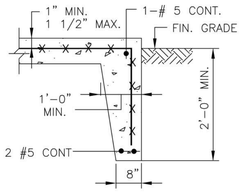
Date: 9/1/2015

Project No: 512A5-13-329

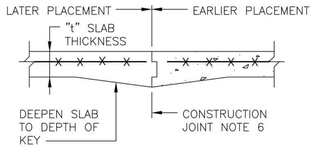
DRAWING NO: S-017

52 OF 124

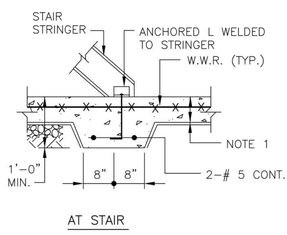
DEPARTMENT OF VETERANS AFFAIRS



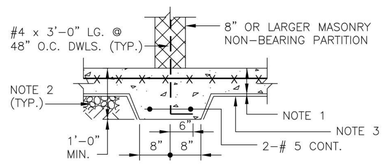
EXTERIOR PLATFORM



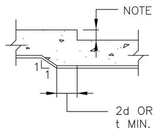
AT CONSTRUCTION JOINT



AT STAIR



HAUNCH AT PARTITION
(NO JOINT)

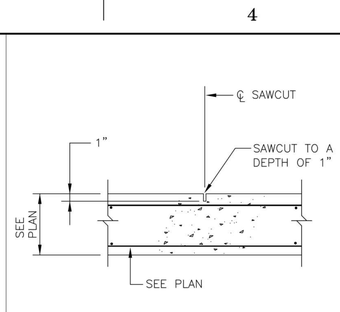


AT DEPRESSION

UNLESS NOTED ON PLANS:
1. ALL SLABS ON GROUND SHALL BE MINIMUM 5" THICK REINFORCED WITH WELDED WIRE REINFORCING AS PER SCHEDULE.
2. SLABS SHALL BEAR ON 6" OF POROUS FILL (3/4" CRUSHED STONE MAX.; RETAINED ON #4 SIEVE MIN.).
3. POROUS FILL SHALL BE COVERED WITH VAPOR BARRIER (STOP VAPOR BARRIER AT HAUNCHES). SEE SPECIFICATIONS.
4. IN TRAFFIC AREAS AND UNDER EQUIPMENT DEEPEN SLAB TO 8" & ADD TWO LAYERS OF WELDED WIRE REINFORCING BOTTOM.
5. FOR DEPRESSIONS – SEE ARCH. DWGS.
6. ALL CONSTRUCTION JOINTS SHALL BE FORMED WITH PREFABRICATED METAL "LOAD KEY JOINT" BY "JAHN CONCRETE FORMING PRODUCTS" OR EQUAL.
7. STOP WELDED WIRE REINFORCING AT CONSTRUCTION JOINTS.
8. WHERE SLAB IS DOWELED INTO WALL, FIRST SLAB CONSTRUCTION JOINT TO BE NOT MORE THAN 25 FT. FROM WALL.
9. FOR EXPANSION JOINT LOCATIONS, SEE PLAN. FOR DETAILS SEE ARCH. DWGS.
10. INTERIOR SLAB ON GROUND:
    A. IF PLACED IN ALTERNATE PANELS, MAX. PANEL AREA = 800 SQ. FT. AND MAX. LENGTH OF SIDE = 40 FT.
    B. IF PLACED CONTINUOUSLY, MAX. PANEL AREA TO BE 600 SQ. FT. AND MAX. LENGTH OF SIDE = 25 FT. (SAW CUT JOINTS AS PER SPECIFICATIONS.

SLAB REINFORCING	
SLAB "t"	WELDED WIRE REINF.
4"	6X6 – W2.1 X W2.1
5"	6X6 – W2.9 X W2.9
6"	6X6 – W4 X W4
7"	4X4 – W4 X W4
8"	6X6 – W4 X W4 T&B
10"	#4@12 T&B
12"	#5@12 T&B

TYPICAL SLAB ON GROUND DETAILS



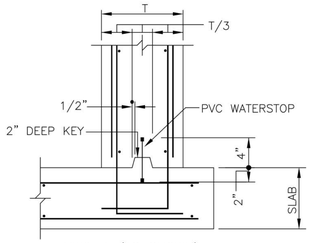
TYPE SCJ
(HORIZONTAL SLAB SAWCUT JOINT)

TYPE HSCJ
(HORIZONTAL SLAB CONSTRUCTION JOINT)

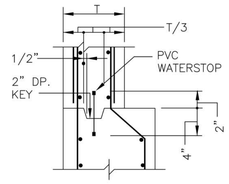
TYPE CTRL JT
(HORIZONTAL SLAB CONTROL JOINT)

NOTES:
1. ALL REINFORCING SHALL BE CONTINUOUS THRU JOINTS AS SHOWN.
2. ALL SAWCUT JOINTS SHALL BE WET CUT WITH AUTOMATED SELF-PROPELLED EQUIPMENT.

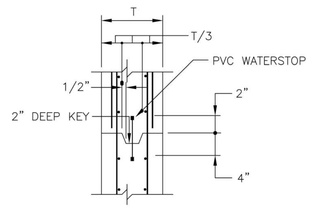
TYPICAL SLAB JOINT DETAILS



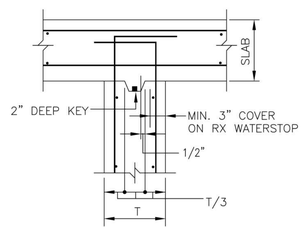
HWC-1 (AS SHOWN)
HWC-2 (OMIT WATERSTOP)



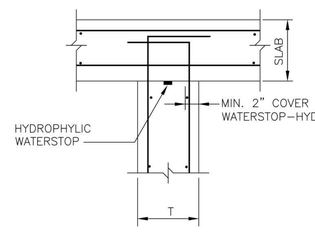
HWC-3 (AS SHOWN)
HWC-4 (OMIT WATERSTOP)



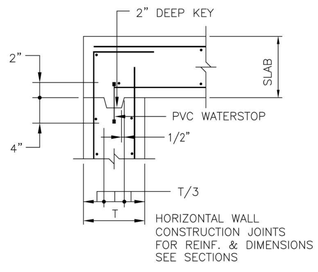
HWC-5 (AS SHOWN)
HWC-6 (OMIT WATERSTOP)



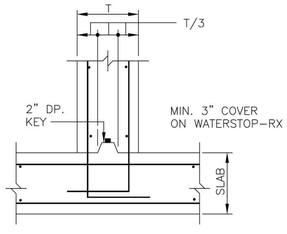
HWC-7 (RX)



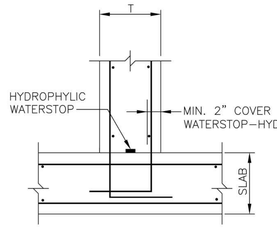
HWC-7 (HYDROPHYLIC)



HWC-8 (AS SHOWN)
HWC-9 (OMIT WATERSTOP)

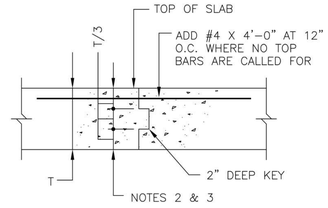


HWC-10 (RX)
UPTURNED KEY WHERE INDICATED ON DWGS.

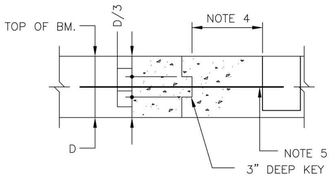


HWC-10 (HYDROPHYLIC)

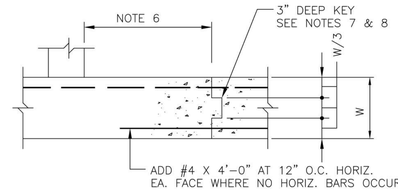
CONSTRUCTION JOINT DETAILS (TYPE HWC)
(HORIZONTAL WALL CONSTRUCTION JOINT)



IN FRAMED SLABS



IN BEAMS



VERTICAL JOINT IN WALLS

NOTES:
1. ALL CONSTRUCTION JOINTS SHALL BE LOCATED AT MIDSPAN OF FRAMING MEMBERS UNLESS OTHERWISE NOTED.
2. ALL REINFORCING SHALL BE CONTINUOUS THROUGH JOINT.
3. JOINT AS SHOWN (▷) FOR SLABS 5" AND LARGER. FOR SLABS LESS THAN 5" THICK, JOINT TO BE MADE WITH ONE BREAK ( ).
4. JOINT TO BE MADE NEAR MIDSPAN. MINIMUM OF 3D FROM ANY BEAM FRAMING INTO IT.
5. ADD 1#6 X 5'-0" FOR EACH 6" OF BEAM WIDTH (AT MID-DEPTH).
6. JOINT IN WALLS TO BE MINIMUM OF 4T AWAY FROM ANY CROSS-WALLS, BUTTRESSES OR OPENINGS IN GRADE BEAM JOINTS TO BE LOCATED NEAR MIDSPAN.
7. PROVIDE PVC WATERSTOP IN ALL JOINTS WHERE WATEPROOF SLABS ARE CALLED FOR AND IN ALL FOUNDATION WALLS.
8. WATERSTOP MAY BE EITHER TYPE 1 OR TYPE 2 TO MATCH W.S. WITH OTHER CONSTRUCTION JOINTS SHOWN IN SECTIONS.

TYPICAL CONSTRUCTION JOINT DETAILS

Fully Sprinklered

Additions:	Date:
Revisions:	
-	-
-	-
-	-
-	-
-	-
-	-

DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763
631-320-1706
Hatch Mott MacDonald

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STATE OF MARYLAND · STEPHEN C. CRICHTON · 45054 · REGISTERED PROFESSIONAL ENGINEER

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	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Approved: Associate Director for Operations:

Approved: Director, Medical Center:

Drawing Title: TYPICAL DETAILS IV

Project Title: POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1
PERRY POINT MD
VAMC

Date: 9/1/2015
Project No: 512A5-13-329

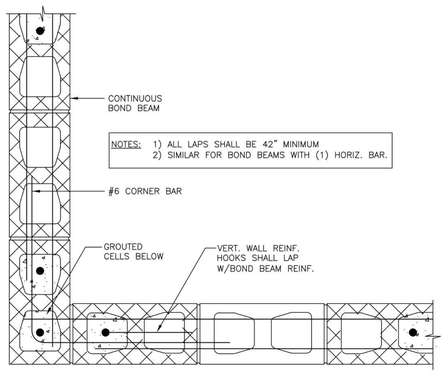
Scale:	Building No:	Checked:	Drawn:
NONE	103	JCC/SNP	CLT

Location: VAMC PERRY POINT, MD 21902

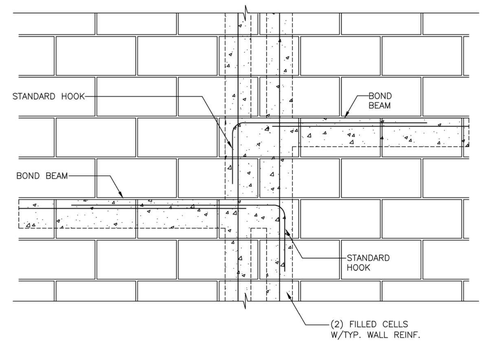
DRAWING NO: S-018
53 OF 124

DEPARTMENT OF VETERANS AFFAIRS

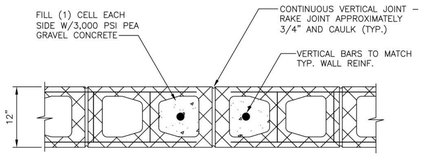
100% Bid Documents, September 1, 2015



BOND BEAM CORNER REINFORCING DETAIL

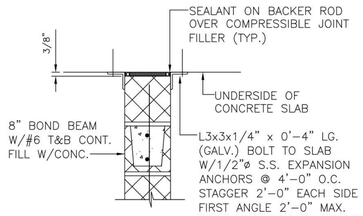


CHANGES IN BOND BEAM HEIGHT

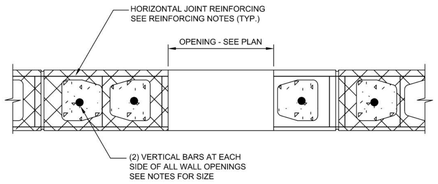


CMU CONTROL JOINTS ARE NOT TO EXCEED 25', TYP. U.O.N. THE JOINTS SHALL BE LOCATED A MINIMUM OF 24" FROM DOOR OR WINDOW OPENINGS TO MISS LINTELS. THE HORIZONTAL JOINT REINF. SHALL BE TERMINATED 2" FROM EACH SIDE OF JOINT. ALL BOND BEAM REINF. SHALL CONTINUE THRU THE JOINT.

CMU CONTROL JOINT DETAIL



PLAN

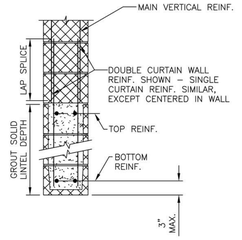


CMU OPENING

LINTEL SCHEDULE						
BUILDING	WALL	OPENING SIZE	LINTELS			REMARKS
			DEPTH	BOTTOM REINF.	TOP REINF.	
WATER TREATMENT PLANT	10" CMU EXTERIOR	4'–0" TO 4'–6"	8"	(2) #4	(2) #4	#4 @
		4'–7" TO 8'–0"	16"	(2) #4	(2) #4	#4@6" O.C. STIRRUPS
		8'–1" TO 12'–0"	24"	(2) #5	(2) #5	2" BOTTOM COVER #4@8" O.C. STIRRUPS
	8" CMU INTERIOR	4'–0" TO 4'–6"	8"	(2) #4	(2) #4	#4 @
		4'–7" TO 8'–0"	16"	(2) #4	(2) #4	#4@6" O.C. STIRRUPS

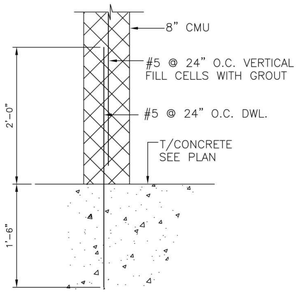
NOTES:

1. BEAR ALL LINTELS A MINIMUM 2'–0" AT EACH END.
2. REINFORCE LINTELS AS INDICATED UNLESS NOTED OTHERWISE ON THE DRAWINGS.



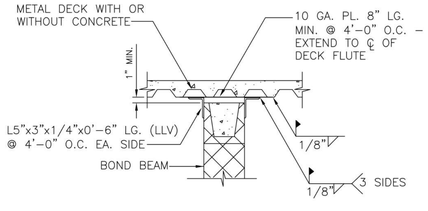
LINTEL – SECTION

TYPICAL MASONRY LINTEL SCHEDULE AND SECTION



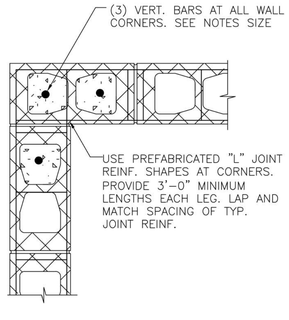
SECTION

CMU INTERIOR WALL REINFORCING DETAIL

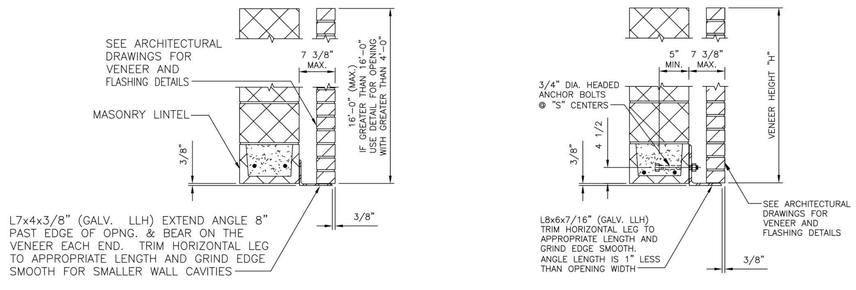


WALL PARALLEL TO DECK SPAN

NOTE: DETAIL WHERE WALL IS PERPENDICULAR TO DECK SPAN SIMILAR. PLATE TO BE 10 GAGE 8" x (O.T.O. OF ANGLE LEGS + 2")



CMU CORNER



OPENING WIDTH LESS THAN OR EQUAL TO 4'–0"

OPENING WIDTH GREATER THAN 4'–0"

VENEER SUPPORT AT OPENING

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 45054, EXPIRATION DATE: 02/09/16

Fully Sprinklered

100% Bid Documents, September 1, 2015

Additions:	Date:
Revisions:	
–	–
–	–
–	–
–	–
–	–
–	–

DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763
631-320-1706
Hatch Mott MacDonald

STATE OF MARYLAND – JOHN C. CLARK – 45054 – PROFESSIONAL ENGINEER

Approved:	*Approved: Chief, Facilities and Engineering:*
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Drawing Title: TYPICAL DETAILS V	Project Title: POTABLE WATER SYSTEM IMPROVEMENTS – TIER 1 PERRY POINT MD VAMC			Date: 9/1/2015
				Project No: 512A5-13-329
Approved: Associate Director for Operations:	Scale: NONE	Building No: 103	Checked: JCC/SNP	Drawn: CLT
Approved: Director, Medical Center:	Location: VAMC PERRY POINT, MD 21902			DRAWING NO: S-019 54 OF 124

DEPARTMENT OF VETERANS AFFAIRS